

PROTECTING PDAs
Companies are gaining the means to encrypt employees' mobile data. **PAGE 53**



ON THE MARK
\$100 million worth of ERP software is being given away to 800 companies, says Mark Hall. **PAGE 8**

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London Attacks Raise Concerns of U.S. Vulnerability

Lack of funding, failure to commit to better security make transit systems prime targets

BY JAIKUMAR VIJAYAN

Last week's terrorist attacks on the rail and bus systems in London highlighted both the vulnerability of the U.S. rail system and the enormous IT challenge involved in defending it, security and terrorism experts said.

Nearly four years after the 9/11 terrorist attacks and about 16 months after the Madrid train bombings that

killed 191 people, U.S. commuter rail systems remain dangerously vulnerable due to a lack of funding and a failure to commit to securing them, experts said. At the same time, the open nature of public transit systems makes them extremely difficult to defend.

"London far and away has been the best-prepared jurisdiction," says a source. *London, page 16*

INSIDE

Locating victims via cell phones would be difficult in the U.S.

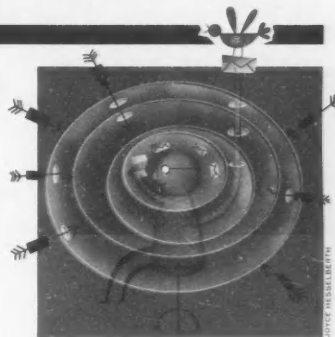
PAGE 16



Last week's attacks in London, including the bombing of a double-decker bus, highlight security challenges that extend to the U.S.

Protective Layers

Some companies have piled on as many as five levels of defense to keep viruses, adware, spam and spyware out of corporate e-mail networks. Check out the latest strategies for blocking malware. **Page 25**



New Battle Brews Over UCITA, Software Licensing Terms

Some users worry that act could be cited by default in courts

BY PATRICK THIBODEAU

A new legislative battle is looming over the controversial UCITA software licensing law. But this time, it's software users, not vendors, who are poised to attack.

The push for state-by-state

adoption of the Uniform Computer Information Transactions Act was abandoned nearly two years ago because of widespread opposition [QuickLink 40364]. But the group of software users that led that opposition has since been quietly drafting its own model software-licensing law. Its concern is that courts may use UCITA as a reference point in legal disputes, giving

vendors a victory through the legal system that they couldn't gain in state legislatures.

"That battle against UCITA is still going on; it's just taken another form," said Riva Kinstlick, vice president of government relations at Prudential Financial in Newark, N.J. "People are starting to be con-

UCITA, page 53

ONLINE: For comprehensive background information, visit our UCITA special coverage page.

QuickLink a1690
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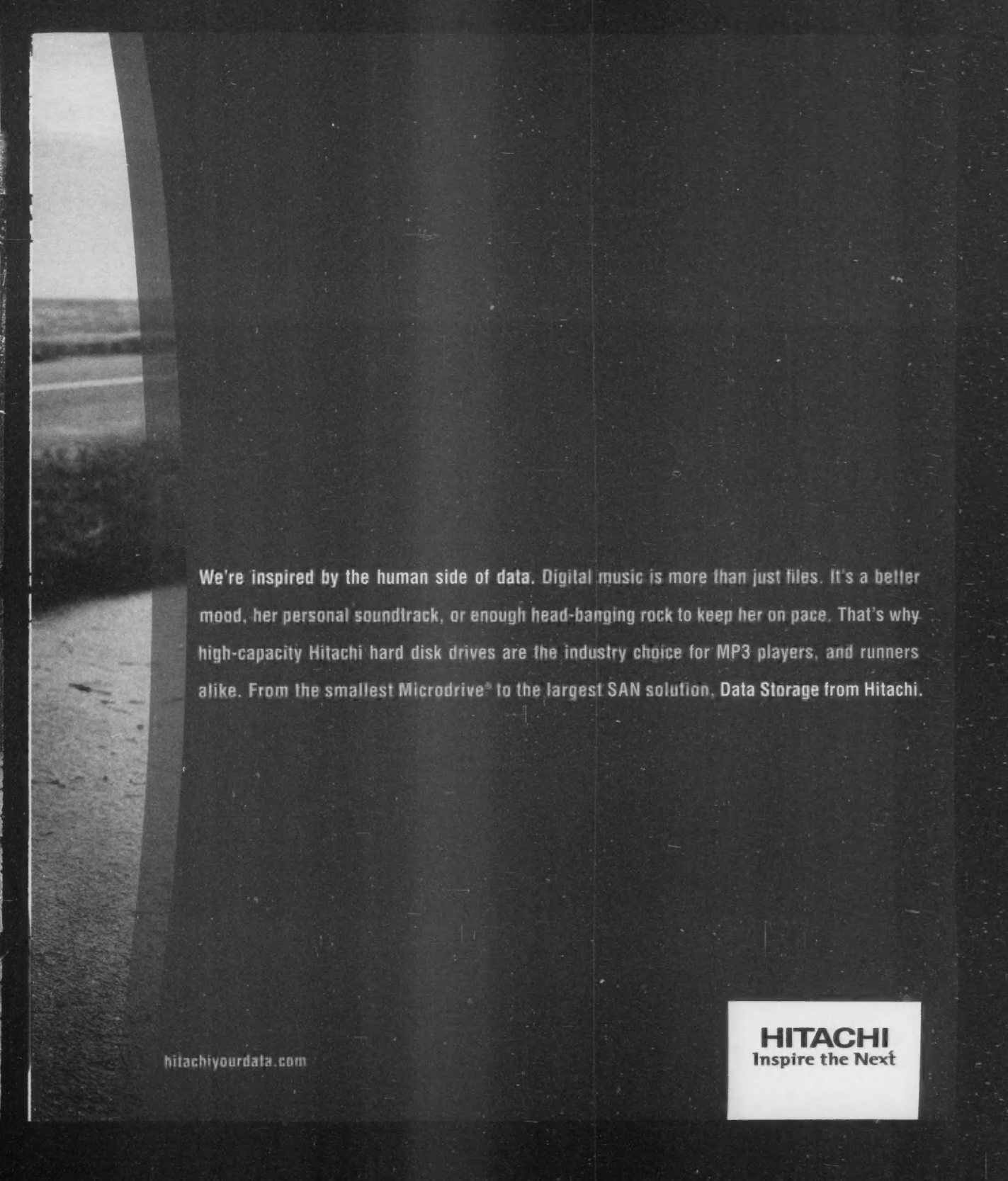
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Big-Time Storage on the Cheap

In the **Technology** section: An increase in functionality and a drop in component prices is making midrange storage networks a bargain, say IT leaders such as Ameritrade CIO Asiff Hirji. **Page 28**



After the Fact

In the **Management** section: "Postgame" analysis of IT projects has never been popular, and tight budgets make it less so, but companies that make the effort say having key players weigh in is well worth it. **Page 39**

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ONLINE

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How Should You Break The Bad News?

PRIVACY: Notify your customers the right way, and they're more likely to stick with you even if their personal information has been compromised, columnist Larry Ponemon says. **QuickLink 55301**

Career Marketing 201

CAREERS: Korn/Ferry International's Jack H. Cage says that identifying key accomplishments and being able to clearly convey them will improve your networking experiences. **QuickLink 55047**

The Project's Red. Tag! You're It

MANAGEMENT: Michael Patterson and Patricia Pruden suggest ways to clarify who has responsibility for a business unit's project. **QuickLink 55291**

Corporate IT and Homeland Defense

WEBCAST: You may think terrorism is the domain of government agencies, but author Dan Verton warns you to be aware of your role in protecting the national cyberinfrastructure. Available as a free webcast. **QuickLink 55810**

How to Evaluate Intrusion-Prevention Systems

SECURITY: Before making a big investment in defense technology, Bob Walder of The NSS Group suggests asking several key questions. **QuickLink 54877**

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AT DEADLINE

Fujitsu to Offer SUSE Linux

Fujitsu Ltd. will begin offering Novell Inc.'s SUSE Linux Enterprise Server software and support services for Fujitsu PrimeQuest and Primergy servers in September. Fujitsu currently offers Windows and Red Hat Linux software development and support services for the Intel-based servers.

Microsoft Prices Data Protection App

At its Worldwide Partner Conference on Friday, Microsoft Corp. said that System Center Data Protection Manager, its forthcoming disk-based backup and recovery server software, will sell for about \$950. That includes a DPM server license and three management licenses. Microsoft also demonstrated the forms functionality due in its next Office release. It lets users enter and edit information from within a browser without using its InfoPath client.

Dell Ships Its First Dual-Core Server

Dell Inc. this week will ship its first server with dual-core chip technology from Intel Corp. A single-socket system designed for small-business use, the PowerEdge SC430 should offer performance that's about 40% better than that of a single-core CPU, Dell said. Pricing starts at \$499. Systems for midsize and large companies are due later this year.

Short Takes

CISCO SYSTEMS INC. Chief Technology Officer Charles Giancarlo will become chief development officer on July 31, replacing the retiring Mario Mazzola. . . . **A U.S. Securities and Exchange Commission** inquiry into an alleged periodic reporting violation by BUSINESS OBJECTS SA ended with no recommendations for enforcement action. . . . **BORLAND SOFTWARE CORP.** reported lower-than-expected quarterly revenue and said CEO Dale Fuller stepped down.

CSX Wireless Project Delivers Quick ROI

Use of BlackBerries grows productivity, lowers turnover

BY MATT HAMBLIN

ONE YEAR after spending \$400,000 on a wireless project designed to speed up communications with 450 independent truck drivers and cut costs, CSX Corp. reported last week that it may have hit a bonanza.

Jacksonville, Fla.-based CSX said the wireless notification application from Air2Web Inc. in Atlanta has cut the number of phone calls truckers make to the CSX Intermodal call center from 20,000 a week to 11,000, said John Dugan, technical director for intermodal applications at CSX Technology Inc.

And because drivers can

now send short text messages and e-mail via Research In Motion Ltd. BlackBerry devices, they each save about an hour per day that they once spent waiting for a dispatcher, Dugan said. That alone improved driver productivity by 400 hours per day — a major reason why driver turnover dropped from 80% to 50% in the past year, he said.

"Fifty percent turnover is still terrible but a big improvement," Dugan said.

Dugan said he believes these productivity gains have helped CSX cover its initial investment "and then some" in just one year. "This technology has exceeded our expectations in terms of payback, new revenue and productivity," he



DUGAN says CSX covered its wireless investment in just one year.

said. "It's definitely helping our business . . . since drivers are not answering phone calls and can do more jobs."

CSX's achievement is noteworthy, given that a 15% to 20% return on investment is considered very good for such projects, said

Jack Gold, an analyst at J. Gold Associates in Northboro, Mass. Deployments of wireless systems for use by field personnel can be highly effective because they usually replace paper processes or a middleman, such as a call center operator.

CSX call center operators who suddenly saw a reduction in the volume of calls they handled have been moved to other jobs, Dugan said.

Intermodal truck drivers may make several trips a day of 40 to 80 miles each, carrying goods from a rail depot to a warehouse or store. With the wireless application, they can be notified instantly when leaving a location with no load and redirected to quickly find another load nearby.

Many of the drivers had cell phones, but they agreed to buy the BlackBerry hardware and pay for the monthly data service out of their own pockets, Dugan said. The drivers pay \$49 per month for unlimited data service and \$49 to \$100 for the BlackBerry hardware.

CSX estimates that about 500,000 loads have been dispatched using the wireless system, which connects to an existing dispatch system called Pegasus. Early next year, CSX plans to add the ability to capture signatures digitally with a Bluetooth-enabled pen device so drivers can be paid faster. And it will add a Bluetooth-enabled bar code reader for scanning shipment documents easily.

55424

Hybrid Discovery Tools Make Debut

Software combines active and passive detection methods

BY MATT HAMBLIN

Two small management software vendors will announce products today that discover IT system components using a hybrid of active and passive detection approaches instead of just one.

San Jose-based NLayers Inc. is releasing NLayers InSight 4.0, which will feature a new hybrid active/passive discovery capability. Separately, Atlanta-based Insightix Ltd. will release Dynamic Infrastructure Discovery, a new product that includes its InSightix Collector for active

and passive network discovery.

NLayers focuses on gathering detailed configuration information about servers and the applications running on them. Insightix, on the other hand, is focused on a real-time inventory of network software and hardware, said Jean-Pierre Garbani, an analyst at Forrester Research Inc.

Garbani said the hybrid approach seems to be new in the market and "will be a good selling point."

Active discovery was added to passive in the new version of InSight, "so IT departments no longer have to make a decision between active or passive," said NLayers CEO Gili Raanan.

NLayers sells InSight as an

appliance with a starting price of \$95,000. Insightix sells software that starts at \$4,000 for 100 devices.

Looking for Detail

The Museum of Modern Art in New York manages 100 servers with a prior version of InSight but wants to move to Version 4.0. CIO Steven Peltzman expects to use the hybrid discovery tool to get more-detailed information on irregularities on a particular server.

Peltzman chose the NLayers product after considering the Insightix offering. "We never got the ball rolling with InSightix," he said.

Brad Martin, senior security analyst at Beta-fil-A Inc. in Atlanta, is beta-testing the new Insightix tool at the same time the restaurant chain is upgrading the core of its network. "We want better visibility into the network and to be able to span multiple virtual LANs," he said.

Chick-fil-A has 3,000 network nodes nationwide, with 1,000 in its Atlanta offices. Martin said he hasn't made a decision whether to buy InSightix because he wants to upgrade his network first and then see the Insightix tool "in all its glory." 55433

Network Discovery Approaches

Active network discovery: Sends packets that probe for network devices, but it can be hampered by firewalls and can degrade network performance.

Passive network discovery: Monitors network traffic at a chokepoint to identify devices, but it will miss idle devices, encrypted traffic and traffic that doesn't go through the monitoring point.

Hybrid: Uses active and passive approaches to provide a more complete picture of the network.

Florida County in Legal Spat Over Purchase of E-voting Machines

Vote leaves county without touch-screen systems; handicap-rights group files suit

BY MARC L. SONGINI

The refusal to purchase specialized voting machines that comply with handicap-access laws has put a Florida county in the cross hairs of the state's attorney general and handicap-rights groups.

On June 29, the Volusia County Council voted 4-3 against authorizing the purchase of 210 touch-screen systems from Diebold Election Systems. According to Florida state law, all counties were obliged to have at least one state-certified touch-screen machine in place by July 1. The Diebold systems meet the handicap-access requirement

because they also house devices that enable blind voters to receive verbal prompts to help them vote.

The council declined to purchase the machines because they don't generate a paper receipt. The majority of the council is joined by critics who maintain that the touch-screen systems can be rigged for political advantage [Quick-Link 53796].

The National Federation of the Blind and others filed suit against the county last week in Orlando Federal District Court.

"This does put Volusia County in a very difficult position," said a county govern-



THE DIEBOLD TOUCH-SCREEN SYSTEMS can be rigged for political advantage, critics such as the Volusia County Council say.

ment spokesman. The four-person majority was "not comfortable with the Diebold system, and now we've been sued, and we'll defend that action," the spokesman said.

He said the council would

prefer to buy a hybrid optical-scan system called AutoMark, which is made by Vogue Election Systems LLC in Glen Ellyn, Ill. AutoMark has an audio component to enable the blind to vote, but the system hasn't been certified by Florida.

None of the four council members who voted down the purchase responded to a request for comment.

Florida Attorney General Charlie Crist issued a letter dated June 30 to council Chairman Frank Bruno, stating that the refusal could subject the county to liability for a civil rights violation.

A Vote for Diebold

Ann McFall, the county supervisor of elections, is urging the purchase of the Diebold machines. She said she directed her attorney to ask a federal judge in Orlando to either force the county to buy them or allow the next election, which is scheduled for Oct. 11,

to take place without them.

A spokesman for McKinney, Texas-based Diebold said the touch-screen machines have been used for 20 years and are completely reliable. In addition, the Diebold AccuVote-TS and TSX machines provide an internal paper receipt and can generate a hard copy of every vote cast via printer, he said.

Volusia County isn't alone in refusing to comply with the July 1 deadline. By emphasizing just touch-screen technology, the state has taken a "heavy-handed approach" to enforcing handicap voting accessibility, said Ion Sancho, supervisor of elections in Leon County, which uses optical scan devices. He wants the paper trail and is holding out for certification of the AutoMark systems. "Voters demand that we can account for every vote 100% accurately," Sancho said. "And my goal is to make sure the votes are counted as intended." **■ 55423**

GTSI Blames Rough PeopleSoft Rollout for Financial Shortfall

Customer relations hurt by flawed ERP implementation

BY MARC L. SONGINI

A challenging \$10 million rollout of PeopleSoft ERP software at a government IT products and services provider hurt the company's bottom line, disrupted customer relations and will delay it from achieving its long-term financial goals.

Chantilly, Va.-based GTSI Corp. last week announced that its second-quarter financial results would be "negatively impacted" by lower bookings and shipments that were the result of "internal distractions and other difficulties" caused by the software implementation. The PeopleSoft software is now part of

Oracle Corp.'s portfolio.

Moreover, GTSI said in a statement that its plan to double its revenue to \$2 billion by 2007 is now in jeopardy.

"The second quarter has been a tough one for our customers, vendor partners and employees," said Dendy Young, chairman and CEO of GTSI. "We have been experiencing difficulties in delivering products to many customers in a timely manner due to software problems with our ERP implementation. This has caused disruption to some customer relationships."

Reports Delayed

The problems have been so severe that on May 31, the company announced that it couldn't provide monthly revenue, backlog and booking reports because it couldn't

validate the data generated by the ERP system.

GTSI bought the PeopleSoft ERP software in July 2004. Before it was rolled out, the company used an "unsupported legacy platform" so heavily customized that only its internal staff could maintain it, said a GTSI spokesman. The legacy software also couldn't scale sufficiently.

The company expected the new software to help increase productivity by allowing more-proactive supply chain management, enabling customer and vendor profitability assessments and improving order management operations.

However, because the software was geared more toward manufacturing, GTSI had to reconfigure it to support reseller operations. "That's part of what you find in these situations," said the spokesman. "You go through alterations of the product, and you encounter difficulties."

Without elaborating, he said those difficulties included both software bugs and procedural errors. PeopleSoft also connects to a number of third-

party systems that support GTSI's distribution center.

"We've worked through an awful lot of issues in the last several months," in part by using Oracle/PeopleSoft support, he said. Although the company has been able to handle orders through the rollout and continues processing shipments, it is doing so at a reduced rate.

The spokesman offered no

"We have been experiencing difficulties in delivering products to many customers in a timely manner due to software problems with our ERP implementation. This has caused disruption to some customer relationships."

DENDY YOUNG,
CHAIRMAN AND CEO, GTSI CORP.

estimate of how much money GTSI has spent to address problems related to the ERP software implementation.

However, in the 10-Q form it filed with the U.S. Securities and Exchange Commission on May 9, GTSI did say the implementation "has consumed resources, diverted management's attention and increased our training costs."

The company said that it believes it has solved most of its operational problems. And the spokesman reported that GTSI still expects to double its revenue, although "it's taking a little longer than anticipated."

GTSI plans to close its books for the second quarter by Aug. 9.

"It's clear this was an implementation that ran amok," said Joshua Greenbaum, an analyst at Enterprise Applications Consulting in Berkeley, Calif. "It indicates a lack of proper planning and lack of good management, and this is all the more shocking because this is a technology service company."

Oracle declined a request for comment. **■ 55435**

BRIEFS

Broadcom Files Suit Against Qualcomm

Broadcom Corp. has filed an anti-trust suit against chip maker Qualcomm Inc. In a complaint filed in the U.S. District Court in New Jersey, Broadcom accused Qualcomm of abusing the process for setting wireless standards, failing to license technologies for cellular wireless standards on fair and reasonable terms, and conducting other anticompetitive practices.

Chinese Gov't Joins Antispam Effort

The Chinese government has joined the London Action Plan on Spam Enforcement Collaboration, an international antispam effort started by the U.S. and U.K. governments. The effort was launched last October to improve investigative expertise and coordination among worldwide groups. The Union Network Beijing will represent China in the organization.

Mercury Lowers Q2 Revenue Estimate

Blaming a sales shortfall in Europe, Mercury Interactive Corp. has scaled back revenue estimates for its second quarter. The company also said a corporate restructuring will result in undisclosed third-quarter charges. Mercury said it now expects second-quarter revenue of \$200 million to \$205 million, compared with its April guidance of \$205 million to \$215 million.

Symantec-Veritas Merger Closes

Symantec Corp. named six former Symantec directors and four former Veritas Software Corp. directors to its 10-member board following the completion of its merger with Veritas. As previously announced, John Thompson will remain as chairman and CEO of the enlarged Symantec, while former Veritas CEO Gary Bloom becomes vice chairman and co-president.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL



IT Self-service Gets a Boost . . .

... this fall when Softricity Inc. releases its ZeroTouch module as part of its SoftGrid software. David Greschler, vice president of corporate marketing at the Boston-based vendor, explains that ZeroTouch builds on SoftGrid's critical capability to "treat

applications like data." SoftGrid's Sequencer module "packages" applications to run on SoftGrid servers, which replace traditional app servers and work with agent code on end-user machines to create virtual applications. When users click on a program that's on a SoftGrid server, the application loads instantly on the PC. SoftGrid knows whether the machine is a laptop or a PC and can set a time limit for how long an app can reside on a mobile device before being disabled. With the arrival of ZeroTouch, end users won't need to hassle IT with requests for application access; the module provides end users with a menu of available apps. Because of SoftGrid's packaging and virtualization process, IT doesn't need to provision the end user's machine, nor does it have to worry about registry problems or broken DLLs resulting from applica-

tion conflicts. Plus, ZeroTouch gives IT the option to appoint workgroup managers within business units to approve application access for end users, taking IT out of an occasionally political process. SoftGrid starts at \$200 per user.

Autonomous computing a distant . . .

... possibility, maybe eight to 10 years in the future. So says Hiep Vuaong, chief technology officer at Net Integration Technologies Inc. in Markham, Ontario. His vision of true autonomous computing means, for example, that when IT adds a server to a network, the machine automatically detects where its resources will be best used, provisions itself, maintains continuous awareness of its condition and network, and adjusts itself accordingly. Vuaong says Nitix, as his company is called, is proposing its UniConf open-source

tool (www.open.nit.ca/wiki) as a step toward true autonomous computing. UniConf does for network resources what LDAP did for end users on the network, Vuaong claims. He says IT can use UniConf to manage resources to minimize software conflicts when provisioning new systems, because the tool knows what works well with what. And what doesn't. Vuaong admits that the idea of a small Canadian company competing with the likes of IBM in the realm of autonomous computing might seem a tad quixotic. But he hopes Nitix's open-source approach gives it a distinct advantage over proprietary approaches.

Free ERP software being given to 800 . . .

... companies that qualify. That's the offer from Larry Pettit, CEO of Carillon Financials Corp. in Richardson, Texas. He says his product competes toe-to-toe and feature-for-feature with ERP products from J.D. Edwards, Lawson, Oracle and others. J.D. Edwards users, he notes, have shown particular interest in the wake of the PeopleSoft/Oracle merger whirl. Pettit says that although his company has been in business since 1990, "we lack name recognition." He claims that the promotion, which will give 300 enterprise and 500 workgroup licenses to the lucky companies, is not a gimmick and that the only requirement is that the new users must buy a



VUAONG says autonomous computing is years away.

standard one-year maintenance agreement. "We're just trying to get market share and visibility," he says. The promotion ends on Sept. 30, and "it's not too late to get in the running," he says.

Traditional business intelligence . . .

... technologies are "dead, done, finished in the next 10 years," predicts Anthony Deighton, vice president of marketing at QlikTech Inc. in Raleigh, N.C. Forget about grinding away for weeks building complex cubes or months creating sprawling data warehouses. Deighton claims that with the arrival of 64-bit systems and cheap RAM for PCs and servers, all you need is BI technology that can read every scrap of data into memory and tools that can query the data in any manner you wish. Naturally, Deighton claims that his QlikView tool does just that right now. He says the trick is the compression algorithms developed by Swedish parent company Qlik-Tech International AB. QlikView, he says, achieves a 10-1 compression ratio, which means a 64-bit chip running Windows XP Professional x64 edition using 128GB of memory can load more than 1TB of data that QlikView can query. And the physical limit of RAM within 64-bit systems is theoretically more than 16 exabytes, larger than any known data warehouse. Given these new system capabilities and products like QlikView, Deighton speculates that the "doomed" entrenched BI vendors are part of a natural technology cycle. "The incumbent never wins," he concludes. ☎ 55403



DEIGHTON posits that old-line BI vendors are dying.

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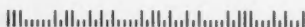
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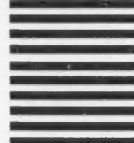
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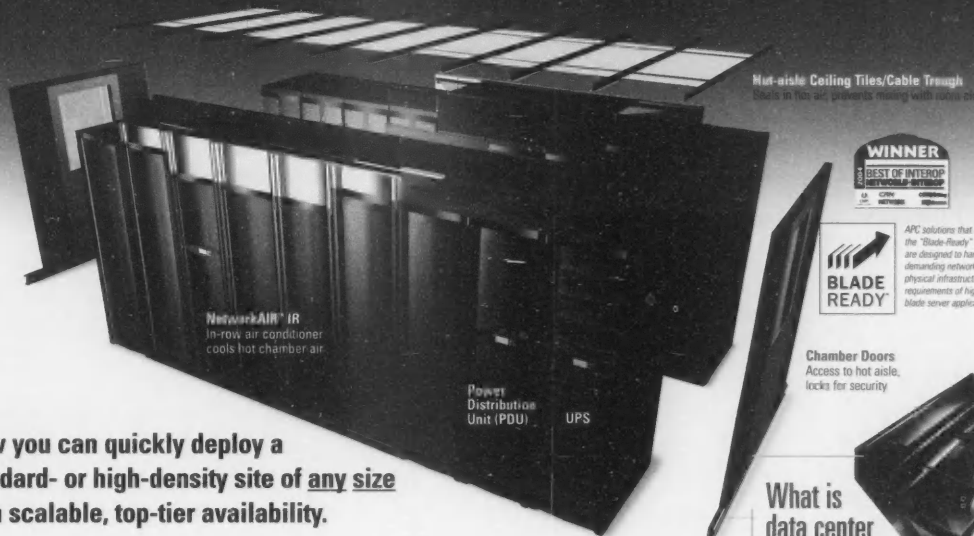
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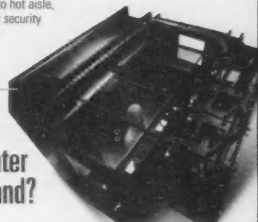
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ISXT280MD40R	40	up to 5kW	\$699,999*	\$21,999**
ISXT280MD100R	100	up to 5kW	\$1,649,999*	\$50,999**

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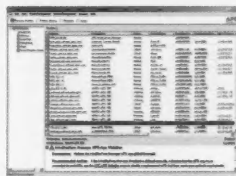
ISXT280HD8R	8	up to 10kW	\$399,999*	\$12,999**
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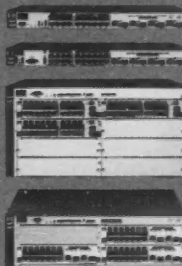


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SeaCode Redefines Nearshore With Floating IT Workforce

Founders promise 'the price of India with the proximity of the United States'

BY PATRICK THIBODEAU

What San Diego-based start-up SeaCode Inc. plans to do is nothing if not novel: anchor a cruise ship three miles off the coast of Los Angeles, fill it with up to 600 programmers from around the world, eliminate visa restrictions and make it easy for customers to visit the site via water taxi. The two men behind the venture — Roger Green, who describes himself as an IT and outsourcing veteran, and IT consultant David Cook, whose job history includes a stint as a ship captain — recently discussed their plan in an interview with Computerworld.

What is the business model?

GREEN: The promise of the benefits of outsourcing in distant lands doesn't come free. Most of the gotchas are related to the geography and to the cultural difference.

What are some of those gotchas?

GREEN: Communicating requirements, doing knowledge transfer [and] managing the project are very difficult to do even when you are in the same building, [let alone] when it's across the world.

That's the same argument made by nearshore providers in Canada.

COOK: But we offer the price of India with the proximity of the United States — that's the differentiator.

How does that work?

GREEN: The model is based on making a platform, if you will, to house these engineers, this workforce, which is very close to the U.S. but which is in fact not in the U.S. We can pull programmers and engineers from anywhere in the world. A fact of life is there are different skills that are stronger in

one country versus another.

Do you have a ship yet?

COOK: No, but we have one in mind. We hope to have it set up and ready to run by the beginning of [next year]. She is a used cruise ship.

Why anchor three miles off the coast?

COOK: It's just more expensive for us to sit alongside a dock, because you have to pay for the berth space.

Does U.S. labor law apply?

COOK: U.S. labor law does not apply



except on a U.S. flagship. The flag of the ship will provide the labor law — more than likely [the ship will be registered in] Vanuatu, the Bahamas or Marshall Islands. Their intellectual property laws, as well as the laws governing seamen, are very similar to the United States'.

What will life be like for your employees?

COOK: The pay is about three times what they earn in India today. Each one will have their own room. They will get meals provided for them, cleaning provided for them, shore leave, laundry and the facilities of a cruise ship. This ship is a working cruise ship that we're going to buy. There will also be a doctor on the ship. The normal working shift will be 10 hours.

What is the salary?

COOK: Approximately \$1,800 a month.

What is your pricing going to be relative to India?

GREEN: We will be approximately the

same price as the distant-shore companies. We will take a little less margin than they do.

Do you expect U.S. residents to apply?

COOK: Absolutely. Approximately 50% of the résumés that we've received are from U.S. residents.

Are you expecting any legislative efforts to block what you're doing?

GREEN: We're not going into business for political reasons. What we're trying to do is accomplish several things: provide new jobs for Americans; [provide] a better deal for American companies that need to be successful in engineering new products to be competitive in a global market; and third, we want to keep the dollars spent on this in the United States. This is a step in the right direction and is not, in fact, part of the flow overseas. **55426**

Microsoft's Server Promo Targets Midsize Companies

BY CAROL SLIWA
MINNEAPOLIS

Following the success of its software package aimed at small businesses, Microsoft Corp. last week made its first concerted effort to court midsize companies with a Windows Server System promotion.

Companies with 25 to 250 PCs will be targeted with the new discounted offer for a single stock-keeping unit (SKU) that combines three copies of the standard edition of Windows Server 2003, one instance of Exchange Server 2003 Standard Edition and the workgroup edition of Microsoft Operations Manager (MOM) 2005. The promotion, due to start next month and announced at the company's Worldwide Partner Conference here, knocks about 20% off Microsoft's Open volume license program prices.

The bundle will also include 50 combination client access licenses for Windows Server and Exchange Server and discount options for additional

CALs, up to a limit of 250.

"Microsoft has done fairly well with the small-business market by combining a host of SKUs within one integrated offering," said Mika Krammer, an analyst at Gartner Inc. "They've dealt well with the large enterprise market, which has a lot of its own skills to select and integrate technology. But the midmarket has been somewhat underserved by Microsoft."

Krammer said Microsoft will likely tweak the offering or

add more bundled SKUs as it figures out the optimal mid-market package. In the meantime, the existing promotion could hold appeal for Windows Server users upgrading from NT 4, or for NetWare users who are uneasy about following Novell Inc.'s Linux path, she said. But a midsize company would have to want all three server products in order to benefit, Krammer added.

MOM Ices the Cake

MOM's price tag turned off C.E. Franklin Ltd. in the past, according to David Curran, manager of IT at the Calgary, Alberta-based distributor of supplies to the oil and gas drilling and production industry. Curran said he would like to get MOM because it could ease administration and help with system alerts at times of trouble.

C.E. Franklin is in the planning stage to replace its aging NT 4 and Exchange 5.5 servers. But Curran said that with 320 desktops, he will have to determine whether the promotion

provides a better price than other volume discount options.

Realityworks Inc. in Eau Claire, Wis., was afforded an early opportunity through Microsoft partner Inacom Information Systems to take advantage of the midmarket promotion to upgrade the NT 4 and Exchange 5.5 servers that service its 58 desktops. MOM was "icing on the cake," said Buzz Burce, the company's only network administrator.

Burce said that in the past, he had to set up monitors and alerts for each individual server, but MOM will allow him to do that from a central place. "It's just so much easier in one place," he said.

In conjunction with the promotion, Microsoft is also offering supporting documentation and tools to help midsize businesses with their deployments. The new guidance includes the Mid-sized Business IT Center Web site within Microsoft's TechNet and a book titled *Windows Server System Deployment Guide for Mid-sized Businesses*. **55411**

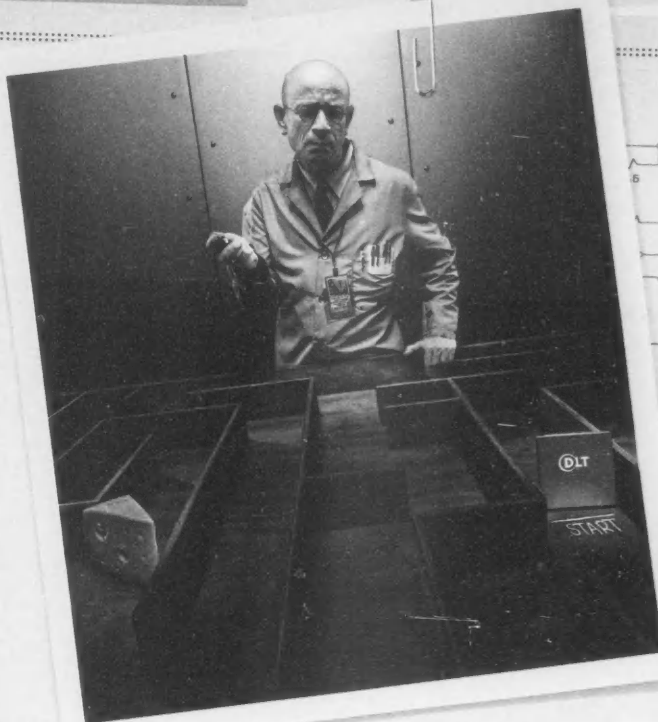
Windows Server System Promotion

WHAT IT INCLUDES: Three copies of Windows Server 2003 Standard Edition, and one copy each of Exchange Server 2003 Standard Edition and Microsoft Operations Manager 2005 Workgroup Edition.

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GLOBAL DISPATCHES

An International IT News Digest

European Parliament Trounces Patent Bill

BRUSSELS

THE EUROPEAN Parliament last week overwhelmingly rejected in a 648-18 vote legislation that critics argued would have allowed widespread patenting of software in Europe.

It has been one of the most controversial pieces of legislation in the history of the European Union. Supporters said the measure was essential to harmonize patent laws across the 25 EU member states. Opponents, including many from the open-source software community, said that it would have allowed a wide range of computer programs to be patented and that it would have given large technology vendors too much power in the software market.

The rejection brings to an end four years of work on the proposal, and the European Commission has said it won't try to draft a new version.

As a result, patents for computer-related inventions "will continue to be

issued by national patent offices and the European Patent Office," EU Commissioner Benita Ferrero-Waldner said after the vote. There will be "no harmonization at the EU level," she said.

■ SIMON TAYLOR, IDG NEWS SERVICE

Undersea Cable Cut Hampers Pakistan Users

BANGALORE, INDIA

A SHIP'S ANCHOR cut the undersea cable that provides most of Pakistan's Internet connectivity and international telephone service on June 27, but the difficult repair work is under way and is expected to be completed this week.

The damage to the cable has crippled Pakistan's economy, particularly its call center industry, banks and online stock trading, said V.A. Abdi, secretary of the Internet Service Providers Association of Pakistan in Karachi. The country has to make do with the 100Mbit/sec. of bandwidth provided by satellite, instead of the

775Mbit/sec. of bandwidth that Pakistan had before the cable break, Abdi said in a telephone interview last week.

The repair crew has been hampered by a monsoon and shallow water at the site, which has made it difficult to navigate the repair ship.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Sasser Worm Creator Convicted in Germany

PARIS

A GERMAN TEENAGER who confessed to creating the Sasser computer worm was found guilty of three counts of computer sabotage and four counts of data manipulation. He was given a suspended sentence of 21 months.

Sven Jaschan, 19, was sentenced at the district court in Verden, Germany, last week after a brief trial [QuickLink 55302]. Jaschan was released on three years' probation and must perform 30 hours of community service, a court statement said. He could also face civil lawsuits from companies whose IT systems were infected by Sasser, which spread on the Internet in May 2004 and crashed hundreds of thousands of computers worldwide by exploiting a hole in Windows. ■ 55405

■ PETER SAYER, IDG NEWS SERVICE

Compiled by Mitch Betts.

Briefly Noted

Wipro Ltd., India's third-largest software and services outsourcing firm, has lost a key executive. The Bangalore-based company's vice chairman and CEO, Vivek Paul, is leaving to become a partner at Texas Pacific Group, a private investment firm in Fort Worth. Wipro announced late last month.

■ JOHN RIBEIRO, IDG NEWS SERVICE

The Peacock Group PLC, a fast-growing clothing and housewares retailer based in Cardiff, Wales, has selected fraud-detection software from Innovetra Ltd., a retail business intelligence software vendor in London. The software analyzes point-of-sale data overnight and reports suspicious activity the next morning.

China's Sino-India Cooperative Office recently announced a joint venture with Microsoft Corp. and Tata Consultancy Services Ltd., an outsourcing firm based in Mumbai, India, to offer IT outsourcing services to global and domestic customers. The venture will start early next year at Beijing's Zhongguancun Software Park.

Oracle to Acquire Another Retail Software Maker

ProfitLogic purchase follows Retek buy

BY STACY COWLEY AND CAROL SLIWA

Oracle Corp. last week continued its foray into the retail industry with a deal to acquire privately held ProfitLogic Inc., a Cambridge, Mass.-based developer of profit optimization software for retailers. Financial terms weren't disclosed.

The acquisition follows Oracle's high-profile purchase of retail ERP software maker Retek Inc. for about \$670 million in April [QuickLink 53620]. ProfitLogic makes software that analyzes factors such as inventory, pricing and promotions to help retailers optimize their financial strategies and improve their profit margins.

Montreal-based Reitmans

Canada Ltd., a retail chain with nearly 900 stores across Canada, uses software from all three companies that Oracle acquired this year — PeopleSoft, Retek and ProfitLogic. The specialty retailer had good experiences during the PeopleSoft and Retek acquisitions, so it's happy about the ProfitLogic purchase, said Diane Randolph, director of merchandising business processes.

"We trust they know how to acquire and merge businesses while still maintaining their customer service," said Randolph. She added that before the acquisitions, "our IT shop was forced to do a lot of integration between these different pieces. Now we can expect a lot more of that integration

to come with the solution."

Reitmans is in the process of rolling out ProfitLogic software for "assortment execution," to get "the right goods at the right time in the right stores," Randolph noted.

She acknowledged that Reit-

mans will now be more dependent on one vendor and could lose some negotiating power in terms of pricing. "But we're confident that Oracle will respond appropriately, because they are still facing competition from SAP and others," she said.

A Good Fit

ProfitLogic is a smart purchase for Oracle, according to retail analyst Alexi Sarnevitz at AMR Research Inc. He said that ProfitLogic's analytics software is among the most sophisticated in the industry and that it will be complementary to Retek's capabilities.

Before buying Retek, Oracle had a limited presence in the retail industry. Now, in a matter of months, it has positioned itself as a major vendor in the

sector, where rival SAP AG also competes. Oracle very publicly snatched Retek away from SAP in a bidding war.

Richard Flaks, senior vice president of planning, allocation and IT at The Children's Place Retail Stores Inc., said he's still digesting the acquisition news and wants to talk to ProfitLogic "to get an understanding of why this is good for us." The Secaucus, N.J.-based retailer is "in the eleventh hour" of implementing ProfitLogic software for markdown optimization.

"I'm hoping that we don't lose the charm of ProfitLogic," he said. "They're small and very services-oriented. I'm hoping there will be some benefits of leveraging the power of a large organization."

■ 55409

Cowley writes for the IDG News Service.

AT A GLANCE

Customer Gains

Oracle will be acquiring ProfitLogic's relationships with high-profile retail customers such as these:

- GAP INC.
- SEARS, ROEBUCK AND CO.
- BLOOMINGDALE'S INC.
- J.C. PENNEY CO.
- BURLINGTON COAT FACTORY WAREHOUSE CORP.

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BRIEFS

IBM Adds Software For Gov't Agencies

IBM announced last week a version of its financial controls compliance software that's designed to help U.S. government agencies meet an Oct. 1 deadline for better financial reporting. The new version of IBM's Workplace for Business Controls and Reporting software is aimed at federal agencies that have to comply with White House Office of Management and Budget regulations similar to those of the Sarbanes-Oxley Act.

Linux Vendors Issue Critical Patches

Gentoo Foundation Inc. has warned of a serious, unpatched security flaw in Zlib, a compression library widely used in Linux and Unix applications. The bug could be exploited to crash any application using Zlib and to run malicious code on a system, security experts warned. Ubuntu, Red Hat Inc., Gentoo, SUSE Linux AG, the Debian Project and The FreeBSD Foundation have issued their own patches to the library.

Study: Threat of IM Attacks Increasing

A study released last week found that hackers and virus writers are increasingly exploiting the opportunities presented by instant-messaging-based attacks. The number of IM attacks such as viruses, worms and phishing scams has increased from 20 for all of 2004 to 571 in the second quarter of 2005 alone, said security vendor IMlogic Inc., which conducted the study.

Short Takes

CURRENT COMMUNICATIONS GROUP LLC, a provider of broadband-over-power-line service, has received funding from Google Inc., Goldman Sachs & Co. and The Hearst Corp. . . . SIEBEL SYSTEMS INC. warned of another set of grim quarterly results. It blamed delayed deals, particularly in the public sector.

Continued from page 1

London

dictions for dealing with these kinds of issues" for some time now, said Jack Riley, an analyst at Rand Corp. in Santa Monica, Calif. Ever since a series of Irish Republican Army bombings in London's subways in the 1970s, the city has been seen as a model when it comes to protecting public transit systems, he said.

"The fact that terrorists were able to carry out something like this in London is an indication of how difficult it is to predict and prevent this kind of attack," Riley said.

A series of four explosions rocked London's public transport system on Thursday, killing at least 50 people and injuring 700 more. Three of the explosions occurred on London's underground commuter-rail system, while the fourth ripped through a double-decker bus.

On Alert

A lot of "common-sense measures" have been taken in the U.S. since Sept. 11, 2001, and the Madrid bombings in March 2004 to better protect public transit systems against such attacks, said Daniel Prieto, research director of the Homeland Security Partnership Initiative at the Belfer Center for Science and International Affairs at Harvard University.

Those measures include the deployment of more security guards and bomb-sniffing dogs, public-awareness campaigns and the installation of better lighting and video-surveillance cameras in stations, he said.

"But if you go out and talk to transit authorities nationwide, the biggest impediment to better security is a lack of funding," Prieto said.

Increasingly, transit authorities are looking for more money for cameras; fences; hardened tunnels; intrusion- and radiation-detection systems;

tools for monitoring tracks, cars and engines; and command-and-control tools to centrally manage security, according to experts.

At a national level, the amount needed for such increased security is around \$6 billion, according to the American Public Transportation Association (APTA), a non-profit group of 1,500 member organizations in Washington.

So far, the public transportation industry has received only \$250 million in federal security funding since 9/11, compared with the more than \$18 billion that has been provided to the aviation industry, the APTA said in a statement released after the London bombings.

"Since 9/11, the federal government's funding of transit security has been woefully in-

adequate," APTA President William Millar said in the statement.

Mark Short, a spokesman for the U.S. Department of Homeland Security, said the APTA numbers "grossly underestimate" the investments made in transit security. For instance, more than \$8 billion has been disbursed to state and local governments for use in anti-terrorism measures, including rail, metro and subway systems.

Some of the security technologies being considered by the aviation industry are impractical for the public transit sector, Riley said. For instance, after the Madrid bombings, U.S. officials considered using technology capable of "sniffing" passengers for the presence of explosives.

"We are at least a decade away before we can even imagine using it in the context of mass transportation" because of the number of people

involved, Riley said. The same is true for other technologies being eyed by the aviation industry, including continuous air-sampling tools and jamming products designed to prevent explosive devices from being remotely triggered.

The degree to which rail systems are trying to address the problem varies widely across the country, said Henry Nocella, chairman of the standing council on global terrorism at ASIS International, an Alexandria, Va.-based security organization with 33,000 members. "The simple fact is that progress has been made, but it is sporadic and it is not consistent," he said.

Ultimately, the emphasis has to be on emergency response as well as prevention, said Bruce Schneier, chief technology officer at Counterpane Internet Security Inc. in Mountain View, Calif.

55438

Attack in U.S. Would Tax Emergency Tracking for Mobile Phone Users

IF ATTACKS SIMILAR to those that occurred last week in London were to happen in the U.S., it would be difficult for emergency crews to locate people trying to summon help via their cell phones, according to experts.

Despite efforts after the Sept. 11, 2001, terrorist attacks to beef up mobile services so cell phones could be used to help track down people, "we're in a sad state of affairs in the U.S.," said Jack Gold, an independent analyst at J. Gold Associates in Northboro, Mass. "If we faced a major disaster like London and had to locate injured people on cell phones today, maybe one or two could be located, but the system couldn't handle hundreds of calls."

"Location [tracking] is not an easy thing to do," he added.

Part of the problem with using enhanced 911 (E911) wireless services would be too many people making calls at the same time, Gold said. Also, technical

complexities and costs have slowed efforts by wireless carriers to implement automatic systems that could be used to locate cell phone callers, Gold and other experts said.

"It's a very difficult problem, given the wireless infrastructure," Gold said. "Don't count on being rescued with your wireless phone unless you know exactly where you are" and can tell an emergency operator clearly.

Not There Yet

Colleen Boothby, an attorney at Levine, Blaszak, Block & Boothby LLP in Washington, said wireless E911 is "a lot better than it was five years ago," but she agreed that the service isn't where public officials want it to be because of some "very technical issues."

E911 tracking will become especially complex for voice-over-IP phones, which can be wired or wireless, Boothby and Gold said. The Federal Commu-

nications Commission in May set minimum standards to help determine the location of VoIP users, such as requiring VoIP providers to record a street address for a user when he signs up for service.

The dilemma of tracking cell phone users has led to new technologies, including one to be developed through a collaboration announced last week between TeleCommunication Systems Inc. (TCS) in Annapolis, Md., and Skyhook Wireless Inc. in Boston. Skyhook's Wi-Fi Positioning System will be integrated with routing technology in TCS's VoIP E911 service, said Skyhook CEO Ted Morgan.

Skyhook locates and records thousands of Wi-Fi access points in major cities and keeps them in a database, so when a Wi-Fi call is made, the location of the access point and others nearby can be sent to emergency personnel, Morgan said.

— Matt Hamblen

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U.S. Effort to Create Animal ID System Lags

Positive mad cow test prompts call to add resources

BY MARC L. SONGINI

AN AUTOMATED national system for tracking animals seems years away from being operational because of numerous challenges. But some experts are pushing the U.S. to quicken the pace, since a cow tested positive for bovine spongiform encephalopathy (BSE), or mad cow disease, last month in Iowa.

Although the Department of Agriculture has been actively working on a livestock-tracking program since 2003, the U.S. continues to lag behind beef-producing rivals such as Japan, Australia and the U.K. [QuickLink 43786].

"The bottom line is that the

program needs to move ahead more quickly than it is," said DeeVon Bailey, an agro-economist at Utah State University in Logan, Utah. "If additional cases of BSE are confirmed in the U.S., it will provide additional incentives to accelerate the implementation of the program," he said.

ID System in the Works

The USDA project, dubbed the National Animal Identification System (NAIS), was officially launched after the discovery of a case of mad cow disease in Washington state in 2003 [QuickLink 43792]. The department is drafting a strategic plan and program specifications; the deadline for public comments was last week.

So far, the big challenges are securing adequate funding and selecting the right technology.

Although there is no official

estimate, some observers have pegged the long-term cost of the NAIS project at \$600 million or more. Cattle ranchers expect the system to be based primarily on radio frequency identification (RFID) tags, though the USDA says other

technologies such as optical scanning are also being researched.

The USDA says a fully operational system is slated to be ready in 2009, when participants will be required to have both their premises and animals logged into a national database that will enable a complete trace within 48 hours.

But the effort to reach that goal still faces considerable problems, according to indus-

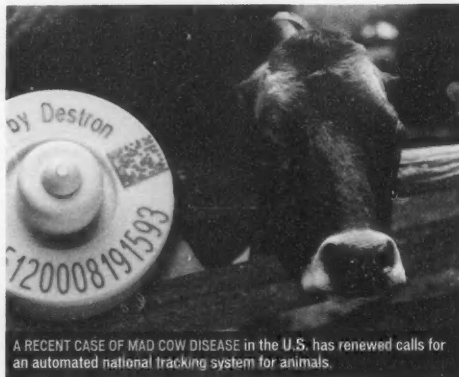
try insiders.

To date, adequate funding for the program hasn't been allocated, said Jess Petersen, director of government relations at the Ranchers-Cattlemen Action Legal Fund, United Stockgrowers of America, a trade and marketing group in Washington.

A USDA spokeswoman said the government appropriated \$33 million for the project in 2005, with another \$33 million included in the White House's 2006 budget. She added that the agency will let the industry decide on the technology.

"There is still a major debate going on in the industry," Robert Fourdraine, chief operating officer of the Wisconsin Livestock Identification Consortium and a member of the NAIS subcommittee, said in an e-mail. "Certain groups feel USDA is going too fast, while others think too slow."

Participants in the effort to create the ID system exist in every state and include various industry associations and cattle-raising Native American tribes, the USDA spokeswoman said. **55396**



Microsoft Previews CRM 3.0

New version will have database marketing module

BY PETER SAYER AND STACY COWLEY

Microsoft Corp. last week outlined plans to release a new version of its CRM software in the fourth quarter of this year. The upgrade will feature one module for managing direct marketing campaigns and another for scheduling personnel and resources.

The new version is a leap forward in numbering, too: Microsoft is jumping directly from the current Version 1.2 to Version 3.0.

Customers will be able to use Microsoft CRM 3.0 either as a packaged product run in-house or as a hosted, subscription-based service.

Analysts said the new version, which will begin shipping to Microsoft partners this month, may finally make Microsoft's CRM offering competitive with other mid-market CRM systems.

"The new product has fixed a lot of the holes," said Sheryl Kingstone, an analyst at The Yankee Group.

For example, in response to requests from users, the new version looks more like Microsoft's widely used Outlook personal information manager, said Brad Wilson, general manager of Microsoft CRM.

A couple of Microsoft CRM 1.2 customers said they're looking forward to 3.0's new features, particularly the tight Outlook integration.

Darryl Nitke, CIO at Cosa Instruments Corp., a distributor of sensors, meters and in-

dustrial controls in Yaphank, N.Y., said he wants to be able to create a task in the CRM application and see the data replicated in his Outlook calendar automatically.

Nitke said another feature in CRM 3.0 will enable salespeople to better manage their prospects by permitting every recorded contact with a client to be aggregated and arranged chronologically.

He added that native support for this feature could eliminate the need for a third-

Microsoft CRM 3.0] has fixed a lot of the holes.

SHERYL KINGSTONE, ANALYST, THE YANKEE GROUP

party tool that costs \$50 per seat.

The new version's ability to do more detailed scheduling and its database schema extension are of great interest to Rick Shrum, director of IT for the Seattle SuperSonics and Seattle Storm basketball teams.

However, Shrum said that he has questions about what the process of upgrading from 1.2 to 3.0 will be like.

Microsoft is still deciding how the new modules will be priced and packaged, according to Wilson.

The decision to skip ahead to Version 3.0 reflects the magnitude of the updates, he said. Late last year, Microsoft was preparing to release CRM 2.0, but feedback from partners during alpha testing convinced Microsoft to delay the software to add new features, Wilson said.

"A lot of what our partners had asked for were things that

were already in our 3.0 road map," he said.

Microsoft claimed that about 4,000 organizations are running Microsoft CRM, and some analyst research suggests that the number could grow rapidly.

In a recent Forrester Research Inc. survey of 1,000 small and midsize businesses, Microsoft was the vendor most commonly named by respondents who said they're evaluating CRM software, Forrester analyst Liz Herbert said.

Customers have had a long wait for Microsoft's CRM update; Version 1.2 came out in December 2003.

Microsoft said it will release CRM 3.0 to existing users in the fourth quarter and sell it to new customers in the first quarter of next year. **55396**

Sayer and Cowley write for the IDG News Service. Computerworld's Marc L. Songini contributed to this article.

Financial Firms to Share Identity Theft Data With FTC

Information sharing is expected to help police with cross-border investigations

BY GRANT GROSS
WASHINGTON

A U.S. center that helps victims of identity theft plans to share consumer complaint information with the Federal Trade Commission and law enforcement agencies to improve investigations.

The Identity Theft Assistance Center (ITAC) will begin sharing information such as the types of scams reported and suspected offenders identified by victims, the center announced last week. The ITAC is supported by 48 large financial services companies.

The center plans to provide

the FTC with that information in about six weeks. The FTC, in turn, will share the data with law enforcement agencies across the U.S.

ITAC officials hope such information sharing will help police investigate identity theft crimes, according to Anne Wallace, executive director of Identity Theft Assistance Corp., the Washington-based nonprofit organization that operates the center.

The ITAC will share information only when victims give their permission, she said.

In many cases of identity theft, local law enforcement

agencies don't have information about identity theft investigations in bordering counties or cities, Wallace said.

With millions of identity theft cases reported in the U.S. each year, small cases that have no obvious links to other local cases can end up on an investigative back burner, she said.

Getting the Big Picture

Investigators "don't have the big picture in many cases," Wallace said. "The goal is to allow investigators to find more than one case — to make links between multiple cases."

In the past, financial services companies often shared identity theft data with local

Identity Theft Hot Spots

States with the most incidents of identity theft per capita:

1. ARIZONA
2. NEVADA
3. CALIFORNIA
4. TEXAS
5. FLORIDA

SOURCE: FEDERAL TRADE COMMISSION, 2004

law enforcement agencies, but there was no national data-sharing effort, she said.

The FTC and ITAC have had a working relationship since the center was founded in October 2003, Wallace said.

The FTC also has relationships with about 1,200 law enforcement agencies across the

U.S., added Lois Greisman, an associate director in charge of the identity theft program at the FTC.


The ITAC is supported by members of the industry group The Financial Services Roundtable and its IT sister organization, BITS. ITAC's goal is to help victims of identity theft resolve their problems.

Among the supporting companies are BB&T Corp., Ford Motor Credit Co., MBNA Corp., U.S. Bancorp and Wells Fargo & Co. **55397**

Gross writes for the IDG News Service.

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DON TENNANT

Just Imagine

I TEND TO HAVE a favorite quote in each week's issue — one that conveys a fact of life in a few simple words. Last week, I found it in Gary Anthes' story "Love that 'Legacy'" [QuickLink 55070], where Northrop Grumman Ship Systems CIO Jan Rideout cautioned against expectations of big maintenance cost savings by moving applications off a mainframe.

"That's overhyped by the suppliers who want to encourage you to replace your mainframe systems," Rideout said.

She's right, of course. So few vendors are making money off of mainframes that there's a concerted effort afoot to convince you to abandon them. The easiest way to do that is to create a buzz that positions mainframes as dinosaurs and the person who supports them as a troglodyte who would dent a blade server if he bumped his head on it.

It has gotten to the point where some vendors who make money off of mainframe hardware and software are embarrassed to admit it. How are they supposed to position themselves as suppliers for tomorrow's technology without intentionally coughing over the word *mainframe*?

Fortunately, that's not IT's problem. IT's problem is supporting the business, and mainframes are going to play a central role in doing that indefinitely. True, there are legitimate reasons to migrate certain applications off of mainframes when business needs change. That's what happened at Northrop Grumman. From a technical standpoint, there was no reason to replace the old code. "The mainframe environment is very secure, configuration management is excellent, and we have excellent tools," Rideout says. Process improvements such as introducing wireless devices that needed to



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be integrated with back-end systems prompted Northrop Grumman's Ship Systems unit to replace some old Cobol and Fortran code with an SAP package.

But the vast majority of business data still resides on Cobol-based systems (70% is a widely accepted figure), and it's silly, if not irresponsible, for anyone to marginalize that fact. As much as the vendors with a vested interest in mainframe-bashing would love to see that old code vanish, it's just not happening.

The reason is simple. The stuff works, and it works really well.

Rideout is unwilling to let the knowledge gained through the cre-

ation and operation of those "legacy" systems go to waste. Instead, she fosters an environment in which older workers share their knowledge with their younger counterparts.

"Once people get over the it's-my-father's-Cobol thing," Rideout says, "the young kids can be a little open-minded and get into these older systems and see that there are some interesting aspects to them."

A veteran systems engineer who wrote to us after reading Anthes' article explained the significance of that with the clarity that only someone in the trenches really can.

"Just imagine a hardware system with today's cost-effective gigahertz cycle time and gigabytes of cost-effective memory running a system as bulletproof and secure as z/OS, as flexible as z/VM, with networking control like Unix, the development power of Java and a user interface like Windows!" he wrote. "That's what we could have had by now if the young folks would have taken the time to learn from the past."

Yeah. Just imagine. **55414**

Don Tennant



DAVID MOSCHELLA

China, India: Here We Go Again

THESE DAYS, it's hard to attend an IT industry conference or sift through the global business news without being subjected to dire warnings about the rising power of India and China. Growing U.S. trade deficits, the appeal of offshore software development and even the rising price of oil all speak to the emergence of competitive challenges. Yet while these issues can't be lightly dismissed, to assess their ultimate significance we should start with the question, "Haven't we heard all of this before?"

At the United Nations in 1956, when Nikita Khrushchev banged his shoe and screamed "We will bury you!" at the U.S. representatives, lots of "experts" believed him. Many pundits thought that centrally managed economies would prove to be superior — a belief that lasted for several decades. Of course, it was the USSR that found itself buried in the dustbin of history.

During the 1970s and '80s, it was Japan's turn. After Japan took over the global consumer electronics market and much of the car industry, many proclaimed that with its close business/government cooperation, its interlocking corporate ownership structures and its long-term market views, Japan and the other Asian "tigers" had discovered a superior form of capitalism. Ezra Vogel's *Japan as Number One* and Clyde Prestowitz's *Trading Places* were required reading. Of course, in 1989, the Japanese economic bubble burst, and many of Japan's "strengths" are now recognized as weaknesses.

In the 1990s, we heard about the emerging European superstate. Europe was already the world's largest economy, and many claimed that its strong social safety net and public sector would expose the weaknesses of the U.S.'s relatively laissez faire approach.



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In his influential book *Head to Head*, MIT economist Lester Thurow argued that Europe was best positioned to win the 21st century race for economic leadership. Today, much of "old" Europe is economically stagnant; political integration has halted, and even the future of the euro is uncertain.

This history demonstrates the healthy U.S. market for excessive rhetoric about global competitiveness. While Japan and Europe have had many successes, so, of course, has the U.S. And yet most of the debate seems based on the view that the world's economic pie is somehow fixed and that the growth of one country must mean the decline of another.

Thus, when you see highly publicized new books such as *Three Billion New Capitalists* (also written by Prestowitz), you might want to keep these examples in mind. The U.S. remains the clear leader in semiconductors, software, aerospace, cyberspace, biotechnology, nanotechnology, entertainment, agriculture, defense and many other sectors that will benefit from growing Chinese, Indian and other markets.

And while future leadership is certainly not a U.S. entitlement and will have to be earned every day, the reality is that with its focus on low-cost manufacturing, China is much more of a threat to Japan and Korea than it is to the U.S. As for India, its growing number of skilled IT workers will prove to be an essential worldwide resource, but it will be decades before India's domestic markets are strong enough to place it at the leading edge of IT value creation. If history is any guide, India and China will have plenty of their own problems, and their success won't have to come at our expense. **55315**

MICHAEL GARTENBERG

The High Cost of Not Training

A FEW YEARS BACK, I was on a plane going to a conference where I was to speak on IT issues. One of the themes of my presentation was that nearly 90 cents of every dollar spent on software for end users was wasted because of a lack of training. Sitting next to me was an older gen-

tleman using what was then a state-of-the-art ThinkPad. It clearly oozed "power user," and the huge (for the time) 14-in. display was amazing and grabbed my attention. In the course of glancing longingly at the screen, I noticed that the application my seatmate was busily typing away in was Windows Notepad. Even more astonishing was the fact that Notepad wasn't zoomed to fill the XGA screen, nor was word-wrap turned on, so he was forced to scroll in four directions instead of two.

After a moment or two of watching this, I introduced myself and we chatted for a bit. It turned out that he was the CEO of his company. He ranted about what a waste of money his PC was and how unhelpful his IT folks were (his actual words were slightly more colorful). Watching him work, I easily understood his frustration. I showed him how to zoom Notepad and turn on word-wrap. From his reaction, you'd think I was Prometheus showing him fire. In exchange for promising



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things aren't getting simpler on PCs. Despite software that claims to be "intuitive" (although I've yet to see a PC intuit anything; I suspect they mean the software is unintuitive, although it isn't that either), most folks won't become productive without training.

I suspect this situation will become even worse over the next year, since vendors are increasingly targeting end

never to divulge either his or his firm's identity (although every time I tell this tale, at least three people say, "Oh, I see you met my boss"), he let me poke around his laptop a bit. I found hundreds of text files saved in his root directory. But though he had every possible PC productivity application installed — office suites, graphics applications, Web tools — no one had ever bothered to show him how to use any of it. He just tripped over Notepad and started using it to get some work done. I thought at the time, "Ninety cents? More like 99 cents in this case."

I share this tale because things aren't getting simpler on PCs. Despite software that claims to be "intuitive" (although I've yet to see a PC intuit anything; I suspect they mean the software is unintuitive, although it isn't that either), most folks won't become productive without training.

I suspect this situation will become even worse over the next year, since vendors are increasingly targeting end

users with marketing pitches designed to gain mind share for their products. IT departments must counter this by keeping users informed of their planning process, but they also must be prepared for an onslaught of support and training challenges as users clamor for the new stuff.

The problem is that when budgets are slashed, training is often the first thing to go. Remember, there's no technology investment that will yield productivity without some learning. Ignore that part of the equation, and it doesn't matter how good the core technology is or whether the technology deployment is being driven by IT or by end users themselves. Instead of productivity, you will get frustrated and angry users who will be loath to approve the next big thing.

Make sure you spend the time getting your executives up to speed on their corporate gear and the stuff they buy themselves, even if it's not IT-approved. Who knows? One of them might be sitting next to me on my next trip. **55371**

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READERS' LETTERS

Certifications Are Limited in Accuracy

I READ BOTH OF Don Tennant's recent columns about certifications ["Certifiably Concerned," QuickLink 5492; "Certifiably Mad?" QuickLink 55056] but didn't see any mention of independent vs. vendor certifications. I agree that vendor certifications are a coin's depth away from useless. They expire at the whim of the vendor (Net, anyone?) and only show that the person has knowledge of a specific product.

Certification should require passing an exam and possibly some experience, and ongoing education requirements should have to be met to maintain the certification. How much respect would you give a doctor who was board-certified by Pfizer? Why would a Cisco certification demand any more credibility?

Dewey J. Cori
Rochester, N.H.

I WOULD AGREE with Tennant except for one disturbing thought: He assumes that certification really

does identify superior technical skills. Meaningful professional licensing involves far more than one-time certification: continuing quality review is essential. IT doesn't have that, partly because it would be difficult to obtain consensus on how to do it.

Possibly the compensation for noncertified people is rising faster than for certified people because many managers think they have found that certification is an unreliable indicator of quality. The more important IT becomes, the more nontechnical managers will want authority over it, so the problem of determining who is really good at IT will only get worse. Rather than insisting on certification, we IT professionals might do better to insist on helping top management evaluate how well middle managers understand and manage IT.

Douglas A. Samuelson
President, InfoLogix Inc.,
Annandale, Va.,
samuelsondoug@yahoo.com

I'VE WORKED WITH several people who had professional certifications (I have none). You would think that I would have been going to them for help, but it was the other way around. They were constantly coming to me with questions, or couldn't finish projects because they were too hard, or needed hand-holding to get things done.

Craig Temby
Senior systems administrator,
Allmerica Financial Corp.,
stemby@allmerica.com

THE EDITORIAL ABOUT my firm's recent findings revealing greater gains for noncertified skills pay vs. certifications made some interesting points. But I wonder if a just-completed Foote Partners study of talent management at technology vendors and Tier 1 IT professional services firms might make Tennant think twice. On average, vendors don't use their own certifications to qualify their workers' skill sets, preferring more rigorous proprietary measures. Moreover, neither IT services firms nor

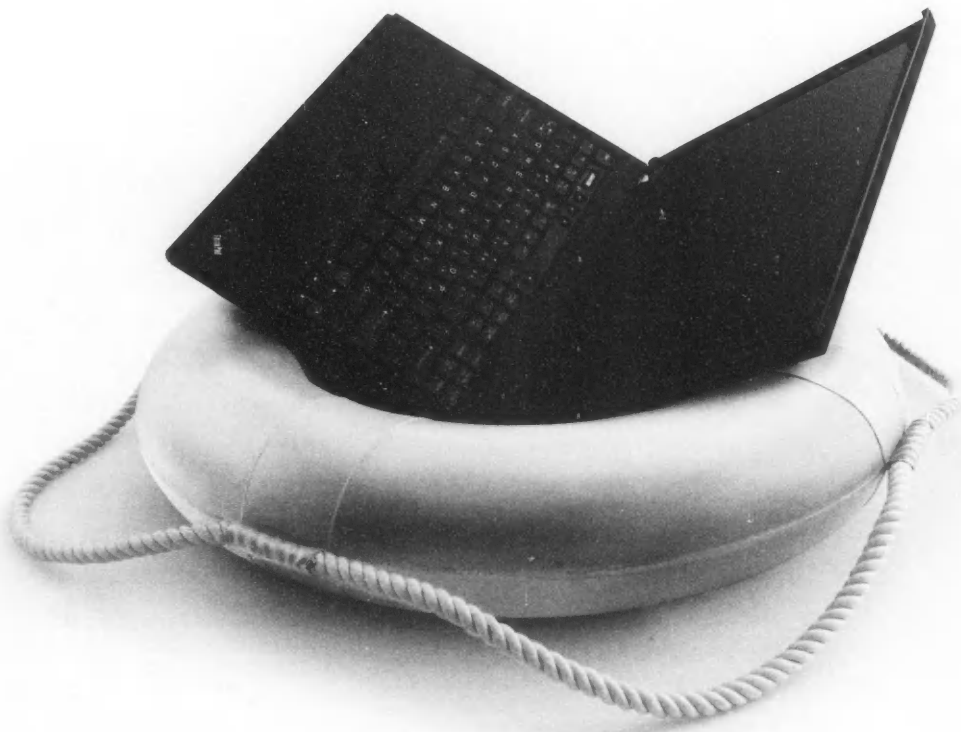
vendors' consulting divisions find that broadcasting publicly available certifications held by their consultants offers much of a marketing advantage. This might come as a surprise if it were not for the reality that certification programs are typically managed by the sales and marketing divisions at tech vendors. Bottom line: Caveat emptor.

David Foote
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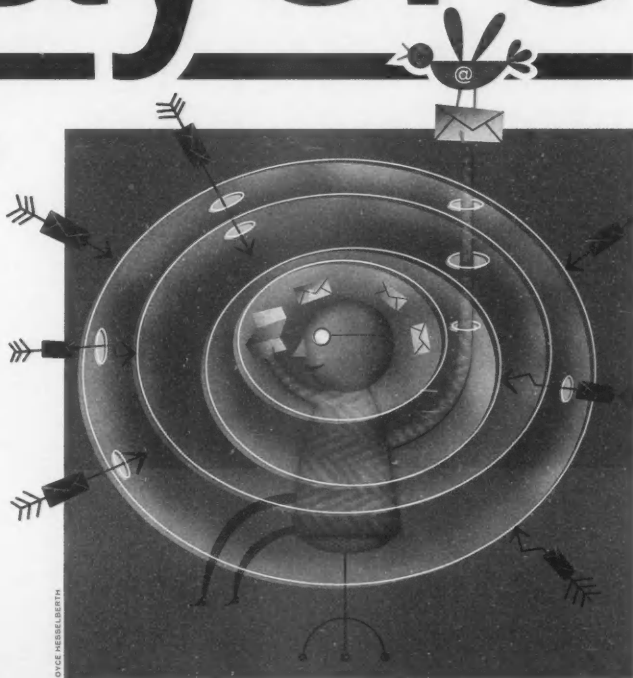
Asynchronous JavaScript and XML is an approach to developing Web applications in which client Web pages are modified incrementally rather than being replaced entirely every time an update is needed. **Page 34**

SECURITY MANAGER'S JOURNAL IDS Pays Off, Even if There's No Hacking

The intrusion-detection system at Mathias Thurman's firm shows its value once more as his security team sets out to mitigate the effects of a nasty worm. **Page 32**

Protective Layers

With so many types of malware stalking the Internet, companies pile on their e-mail defenses. **By Sue Hildreth**



WHEN THE NIMDA WORM struck in 2001, one of its many victims was the Virginia Hospital Center in Arlington. The worm crashed servers, erased data and forced VHC to hire a consultant.

"It deleted files and brought a couple of servers to their knees," says IT director Mark Rein, who joined VHC a year after Nimda struck. "We had to have a company come in and eradicate the virus."

Fortunately, the virus didn't attack patient data. But it did provide a wake-up call, making VHC aware that it needed better e-mail security. There wasn't a silver bullet that could stop all viruses and — nearly as bad — spam, so VHC opted for multiple overlapping defenses.

Today, the hospital is protected by five layers of anti-virus and anti-spam defenses: an e-mail relay and antivirus product called eSafe from Aladdin Knowledge Systems Ltd.; an antispam and antivirus device from MailFrontier Inc.; antivirus software from Symantec Corp. on the e-mail servers and desktops; and a Web filter from Websense Inc. to monitor HTTP traffic and prevent employees from accidentally downloading viruses from the Web. Finally, the hospital uses a Juniper Networks Inc. intrusion-detection and -prevention product to alert IT staff to anomalies in network traffic or unauthorized software on the system.

Sound excessive? In this era of massive malware attacks, such multiple layers of defense are, in fact, not paranoid but prudent.

On an average day, 1 in every 33 e-mail messages is infected with a virus.

In a March report from Ferris Research in San Francisco, antivirus software vendors said that there were nearly 100,000 viruses in existence then and that the number is increasing each month. F-Secure Corp., a vendor of antivirus products in Helsinki, Finland, notes that the largest virus outbreak in 2004, MyDoom.A, churned out nearly 10% of global e-mail at its peak.

Another problem is spyware and adware, small programs that install themselves on a PC and either push out advertising or, in the case of spyware, track user activities. Such programs can come from the most innocent of sources.

Last fall, for example, the U.S. Department of Energy's Carlsbad, N.M., office was perplexed by a sudden flood of pop-up pornographic ads on employee PCs. "We couldn't understand how we were getting all this traffic from adult sites," says Paul DeVito, information systems site security manager.

His staff traced it to a weather site

At least 100,000 e-mail viruses exist today, and the number is rising.

SOURCE: FERRIS RESEARCH

used by the DOE that had been hacked and was downloading X-rated adware to visitors' PCs.

Besides cutting productivity, adware and spyware can also cause computer problems and worse. "It can cause instability in PCs, operations to crash, slow performance," notes Chris Williams, a senior analyst at Ferris Research. "And it can log your keystrokes and report those back to a Web site, so your network log-in is being compromised."

Security Strategies

How can a company shore up its servers and desktops against this rising tide of malware? First, say experts, educate employees on spam and viruses. But education can go only so far; technology is also needed. Here are five steps for defending against malware.

1 RESTRICT USER PRIVILEGES.

The fewer the system privileges on a user's desktop, the fewer opportunities there are for viruses and spyware to take over, says Andrew Jaquith, an analyst at The Yankee Group in Boston. "The biggest reason companies have spyware problems is the user privileges are set too high," he says.

IT may also opt to block certain types of attachments, such as executable or Zip files, and prevent access to certain Web sites. The DOE's Carls-

bad office now uses Websense software to block access to adware- and spyware-heavy sites, such as gambling sites. It also relies on an e-mail firewall from Tumbleweed Communications Corp. with built-in McAfee Inc. antivirus and spyware filtering tools.

2 APPLY PATCHES IMMEDIATELY.

Installing security patches and updates is critical, regardless of how much antivirus protection you may have. JetBlue Airways Corp. in Forest Hills, N.Y., for example, has layers of antivirus and antispam defenses, but its IT staffers also apply new security patches promptly, says Lesen Wang, IT e-mail systems administrator at JetBlue.

"Even with an antivirus program, a virus can get through," he says. Two years ago, for example, JetBlue's desktops were infected by the Blaster virus because they hadn't been patched, but the airline's servers, which had received regular updates, remained unaffected.

3 SWITCH TO ALTERNATIVE E-MAIL PACKAGES.

While not guaranteed to be shielded against viruses, non-standard (that is, not Microsoft) software is less likely to be targeted by virus writers.

For example, Brett McKeachnie, network systems administrator at Utah Valley State College, reports that the school, which uses Novell Inc.'s GroupWise, never had a virus problem and didn't realize it was receiving viruses until it installed iSolation Server, an e-mail security product from Avinti Inc. in Lindon, Utah.

"Avinti put [iSolation Server] into the mail stream, and the next thing you know, we've got 40 to 50 viruses hitting the filter," says McKeachnie. However, not everyone at Utah Valley State uses GroupWise — some are on Outlook — so the college remains vulnerable to virus attacks and, of course, spam.

4 BUILD A MULTILAYERED DEFENSE.

There are several approaches to antivirus and antispam protection, none of which is 100% effective. So using two or more is a useful strategy, say experts.

Techniques for blocking spam include maintaining blacklists of spammers' Internet addresses and employing the challenge/response strategy, which attempts to catch spammers by asking a suspicious sender to resend the message, the assumption being that an automated spam program won't reply. Another option is Bayesian filters,

It's 11 p.m. — Do You Know What Your Computer Is Doing?

Are your PCs moonlighting? If you haven't been safeguarding them against viruses, they might be part of a "botnet," or a network of robots. Virus writers create botnets by taking over hundreds or thousands of PCs that are then used by spammers to spew out spam mailings.

This is the result of a problematic trend: the collusion between spammers and virus writers, according to Ferris Research. Virus writers create

malware to infect users' servers and desktops. These zombie botnets are then rented out to spammers. Because the spam is coming from multiple addresses, none of which actually belongs to the spamming organization, it's impossible to track the true origin of the spam and punish the spammer. Instead, unwitting victims suddenly find their organizations' e-mail domains blacklisted.

Besides putting antivirus protection on PCs and filtering incoming e-mail attachments, it's wise to filter outgoing e-mail, so you can tell if you've got a potential bot infestation inside your company.

— Sue Hildreth

which "learn" to recognize spam from samples that an IT administrator or an end user feeds it. The filter then uses probability scores to decide whether an e-mail is likely to be spam.

Signature-based scanning is the most common approach for identifying viruses, but it doesn't help when there's a brand-new virus on the loose. The "zero hour" problem — the time lag between the initial release of a new virus and the point when an antivirus software vendor can issue a patch update — is the biggest problem with signature-based products, especially since the gap can be as long as eight hours. Companies relying solely on pattern-based antivirus protection are vulnera-

ble to new viruses during that time.

One technique that attempts to close this gap is blocking technology that shuts down access to certain systems if it detects any initial virus activity. For example, JetBlue used Trend Micro Inc.'s signature-based ServerProtect, but it opted to add IronPort Systems Inc.'s C-Series antivirus and antispam device, which includes a blocking technology called Virus Outbreak Filter. The filter quarantines suspect e-mail if it detects a new virus outbreak based on data from IronPort's SenderBase e-mail monitoring network.

Yet another approach to blocking viruses is heuristics scanning, which detects viruses by analyzing a file's structure, behavior and other attributes instead of looking for a pattern match in the code.

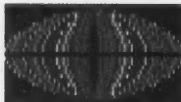
The bottom line, say experts, is that two or more defensive technologies — whether in different products or combined in one — are better than one.

Just as using two types of antivirus or antispam software can increase your odds of catching malware, so, too, can locating defensive products at different points on your network. Firewalls, SMTP gateways, HTTP gateways, e-mail and file servers, and desktops are all good places to defend.

Monrovia Nursery Co., a national plant and flower wholesaler in Azusa, Calif., recently added its fourth layer of security: an antispam and antivirus gateway from MailFrontier in Palo Alto, Calif. The new gateway complements an existing firewall — which blocks attachments such as Visual Basic scripts — and antivirus software from Symantec on its e-mail servers and desktops. "It's another layer of protection," says Ray Martin, Mon-

The Enemies

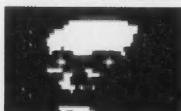
Here are a few images of viruses that have infected Internet mail.



HLC-Globe-8001B



Mac/CODE-9811



Phantom

rovia's IS technical manager. "Redundancy and variety are good when it comes to e-mail security."

The main point of a multilayered defense, says Richi Jennings, a Ferris Research analyst, is to cover all of the potential points where a virus could enter. Too often, he says, companies think they're immune to viruses, when in fact they've failed to cover a key point of entry.

"You may feel you have a clean architecture, with virus scanning on the perimeter of the network," Jennings says. "But if you've forgotten a vector — such as a laptop that has a virus and gets plugged into the company network — then suddenly you've got a bunch of infected machines because you didn't put antivirus on the desktops."

5 USE AN OUTSIDE SERVICE. If you want a multitiered defense without having to purchase individual products and implement them, an outside anti-

virus and antispam service may be the answer. Companies such as MessageLabs Ltd. and Postini Inc. will intercept and clean your e-mail of viruses and spam before sending it to your e-mail server, thus sparing you the software and hardware expense of scanning and processing your own e-mail.

Internet service providers may offer antivirus and anti-spam filtering services to corporate clients. For example, virus and spam filtering at Bata Canada, a unit of shoe manufacturer and retailer Bata International, is handled by Bata's service provider, Pathway Communications in Markham, Ontario.

One major advantage, according to Eli Gabbay, manager of IT technical support at Bata, is the ability to offload some of the administrative chores to Pathway. "I found [antispam and antivirus software] to be very complicated.

... There's a lot of work for me to do to maintain it," he explains. "Now the only thing I need to do is put any spam that gets through into a folder, and Pathway adds it to its database."

Typically, antivirus services use signature-based scanning in combination with other approaches to optimize

their success rates. And they clean up the e-mail before it ever reaches their customers' servers. Some users are also turning to antivirus and anti-spam service providers to clean up their e-mail before it even hits their firewalls.

Euro RSCG Worldwide, a New York-based international advertising and marketing firm with 233 agencies,

turned to New York-based MessageLabs for help in dealing with a rising flood of spam that threatened to overload its e-mail servers.

"We had more spam coming in than legitimate e-mail," says CIO John Tan-

ner. "It got to the point, last August, where we were going to have to increase our hardware by 33%."

Euro RSCG tried blocking spam at the firewall with blacklists, but that approach resulted sometimes in blocked mail from prospective clients whose addresses or e-mail servers had been hijacked by spammers. So the ad agency tried the MessageLabs service, which culls spam and viruses before sending the clean mail on.

Of course, the company still uses antivirus software on its servers and desktops to be safe. But so far, spam has ceased to be a problem. "I don't have to manage any hardware or software. I don't have to worry about upgrading hardware because spam has increased," says Tanner. "Spam has disappeared from the planet for us." **55264**

Hildreth is a freelance writer in Waltham, Mass. She can be reached at Sue.Hildreth@comcast.net.

At its peak in 2004, MyDoom.A produced nearly 10% of global e-mail.

SOURCE: K. SECURE

It's been 1,356 days without a network problem.



Ricoh dependability moves your ideas forward.
How well do you share?



RICOH
Image Communication

ricoh-usa.com/itchannel

INCREASED FUNCTIONALITY AND LOWER COMPONENT PRICES ARE MAKING MIDRANGE STORAGE AN ATTRACTIVE OPTION FOR MANY COMPANIES.

BY LUCAS MEARIAN

LATE LAST YEAR, Ameritrade Holding Corp.'s IT department began ripping out its high-end monolithic storage systems and replacing them with less-expensive and more-modular midrange storage arrays.

Asiff Hirji, CIO at the Omaha-based online brokerage, prides himself on having the most cost-efficient platform possible and says, "The performance in the midtier storage systems has come to the point where, for our needs, they do what we need them to do. We don't need to spend the additional money on the high-end systems. That's made a big difference on our cost per gigabyte."

The saturation of the enterprise marketplace with Fibre Channel storage-area network technology has forced vendors to look to midsize companies to fill their SAN orders. But in order to sell to that market, vendors have been forced to offer the same functionality that had been exclusive to high-end systems, industry experts say.

High-end or monolithic arrays are housed in refrigerator-size cabinets and come with all the processing capacity they'll ever have as well as a full set of feature functionality. High-end boxes can cost more than \$1 million. In comparison, midrange or modular storage arrays range from \$50,000 to about \$300,000. Midrange arrays are housed in a rack and can start out as a low-end product and grow through the addition of controllers (processors) and functionality as business needs grow.

For example, Hewlett-Packard Co. announced in March that for the first time its SAN-to-SAN fail-over capability can be added to its midrange Enterprise Virtual Array (EVA) products. Other high-end functionality, such as data snapshots, data mirroring and data migration, is now commonly found in midrange arrays from most major vendors.

"The pressure is on the high-end [systems vendors]. Users know the level of sophistication has moved downstream, and it gives them another op-

tion for storage," says Tony Prigmore, an analyst at Enterprise Strategy Group Inc. in Milford, Mass.

The trend downward is also revealed in vendor sales. EMC Corp. reported in its first-quarter earnings this year that its midrange Clarilion line of storage arrays and related software saw more than a 40% revenue growth for the fourth quarter in a row. Meanwhile, its high-end Symmetrix array line went from 5% revenue growth four quarters

ago to a 3% drop in revenue in the first quarter of this year.

Mike Sink, director of network and operational infrastructure at the Kichler Lighting Group in Cleveland, a wholesale lighting and fixture company that has customers in 140 countries, replaced a high-end EMC Symmetrix array a year ago with a midrange EMC Clarilion

CX600 array with 12TB capacity in order to back up 30 Unix and 30 Windows servers.

"The Clarilion line has a lot of the same functionality that the Symmetrix has. The core functionality like replication, cloning of disk, snap copies, SAN mirroring. . . Those tools have

Continued on page 30

STORAGE SALES 2004

High-end storage
sales revenue:
\$5.023B
Units sold: 10,543

Midrange storage
sales revenue:
\$6.851B
Units sold: 168,015

SOURCE: GARTNER



"We didn't need to spend the additional money on the high-end systems. That's made a big difference on our cost per gigabyte."

ASIFF HIRJI, CIO, AMERITRADE

BIG-TIME STORAGE ON THE CHEAP

THE IRONPORT C-SERIES WITH VIRUS OUTBREAK FILTERS™

IronPort Virus Outbreak Filters detect and stop viruses before any other technology.

VIRUS NAME	IRONPORT'S EARLY DETECTION ADVANTAGE
Multiple "Bagle" Variants	DETECTED 41:43 hours BEFORE ANY OTHER TECHNOLOGY
"Mydoom.BB"	DETECTED 27:49 hours BEFORE ANY OTHER TECHNOLOGY
"Sober.J"	DETECTED 10:23 hours BEFORE ANY OTHER TECHNOLOGY
"Wurmark-D"	DETECTED 20:05 hours BEFORE ANY OTHER TECHNOLOGY

Today's email borne viruses propagate globally in hours or minutes, much faster than traditional defenses can react, leaving you exposed to the "reaction time gap". IronPort Virus Outbreak Filters stop viruses up to 42 hours before traditional virus definition files are available, literally predicting virus attacks before they cause harm. This astounding solution is powered by a series of proprietary algorithms that process data from IronPort's SenderBase, the world's first and largest email traffic monitoring network. Available now at www.ironport.com/leader

"Virus Outbreak Filters helped us from the first day we had it and it saves us significant clean up costs during major virus outbreaks."

MARK S. DIAL
E-Messaging Team
Tellabs Inc.



Rebuilding the World's Email Infrastructure.



Continued from page 28

been offered at the midrange level, which is an advantage to us," Sink says.

Adding to the appeal of midrange systems is the plummeting price of Fibre Channel components, such as Advanced Technology Attachment (ATA) disks, host bus adapters (HBA) and network switches, as well as vendor package deals that have placed high-functionality SANs well within the reach of midsize businesses.

Josh Howard, an enterprise storage specialist at CDW Corp., a \$5.7 billion technology reseller in Vernon Hills, Ill., says HBAs are less than half the price that they were two years ago and storage switches have also dropped to about half their former price. Those prices are wooing companies into buying midrange SANs, which tend to be designed for companies with about 1,000 employees or more.

Howard says much of the pressure to reduce prices is coming from competition from IP-based storage, such as Internet SCSI.

"A lot of iSCSI vendors are bundling in host-based replication, and it's at a much lower cost when you use iSCSI versus Fibre Channel," Howard says.

But performance continues to be an issue with iSCSI adoption. IP-based storage currently poses no real challenge to Fibre Channel because Fibre Channel is still four times as fast as iSCSI, says Bob Passmore, an analyst at Gartner Inc. Fibre Channel is also far more reliable because it was built for storage subnetworks and not LANs like SCSI, he adds.

But as iSCSI continues to creep up the data center food chain and the price of 10Gbit/sec. Ethernet drops, there will be increased pressure on Fibre Channel storage vendors to cut costs. And eventually, iSCSI could replace Fibre Channel as the most popular storage subsystem interconnect.

Dan Harrison, a Unix systems administrator at the New York State Unified Court System in Troy, N.Y., last year replaced a high-end EMC Symmetrix array with several midrange boxes from Network Appliance Inc. because doing so gave him the choice of using network-attached storage, a Fibre Channel SAN or iSCSI.

Harrison purchased a cluster of NetApp FAS960 arrays, a FAS250 and FAS270 and a R200 NearStore array. He says he was won over to the midrange boxes in part because they came with software for taking snapshots of data for backups and can mirror data changes between arrays — features that had formerly been available only

on high-end systems like Symmetrix.

"Our current storage environment is easier to administer. With respect to hardware, I can say our administration is simplified and our productivity is up as a function of that," Harrison says. He also uses the iSCSI connectivity on the FAS960 to consolidate backup of the court system's Linux, Unix and Windows servers.

One advantage of midrange arrays is that they allow companies to use relatively low-cost ATA disks to build a tiered infrastructure internal to the box by using a combination of ATA memory and Fibre Channel or SCSI disks. Higher-end boxes have yet to offer that feature.

Hitachi Data Systems Corp.'s Thunder line of arrays, HP's EVAs, NetApp's FAS arrays and IBM's DS4000 and DS8000 series arrays all have the option to use ATA disk technology.

LEARNING CURVE

One of the arguments against rolling out Fibre Channel is the complexity of the network. Most companies must hire Fibre Channel network administrators to configure and maintain the systems.

Nowadays, however, many vendors are offering preconfigured SANs that are fairly easy to deploy. But preconfigured doesn't mean cheap, analysts say.

Joel Reich, senior director of product marketing at NetApp, said bundled SANs are being sold more for ease of configuration than for cost-cutting. "We're not in the camp of trying to find out ways to knock pennies out of the cost of Fibre Channel. Fibre Channel will never get to the cost of Ethernet," he says.

Sink says Kichler Lighting's Clariion came preconfigured with 16-port switches from Brocade Communications Systems Inc. in San Jose and HBAs from Emulex Corp. in Costa Mesa, Calif. While there was a learning curve for his systems administrators, it was relatively small because the software tools are "very intuitive," says Sink.

"We didn't have to hire a Fibre Channel expert. It didn't even require a network administrator. The Unix admin was able to connect everything and provision the storage," says Sink, who has a staff of 25 IT personnel to manage storage for Kichler's 600 employees.

The Clariion CX600 was under \$100,000, and with network hardware and management and replication software, the SAN cost about \$300,000 for the original 4.5TB capacity.

"You can buy a \$50,000 SAN with 4.5TB of ATA disk or a million-dollar system with 4.5TB of Fibre Channel

Bargain SANs

Bundled SANs available from vendors for under \$100,000:

■ **EMC Clariion CX300** with Navisphere Manager, 4TB storage, an eight-port Fibre Channel switch and eight HBAs: **\$87,000**

■ **EMC Clariion CX500** with Navisphere Manager, 2TB storage, eight-port switch and four HBAs: **\$82,000**

■ **HP EVA 3000 array** with 12TB capacity, multipathing and management software: **about \$32,000**

■ **NetApp FAS270C** with iSCSI, FCP and CIFS protocols, 6.3TB Fibre Channel drives, SnapManager for SQL Server or Exchange, SnapRestore, two eight-port Fibre Channel switches, 2x Windows Fibre Channel dual-attachment kits, and a standard hardware and service warranty: **under \$100,000**

■ **NetApp FAS270C** with iSCSI and FCP protocols, 6.3TB Fibre Channel drives, SnapManager for SQL Server, SnapManager for Exchange, SnapRestore, two eight-port Fibre Channel switches and 2x Windows Fibre Channel dual-attachment kits: **under \$100,000**

■ **IBM DS4000** with 6TB, two HBAs, L10 storage switch and four IBM Shortwave SFP transceivers: **\$44,077**

■ **IBM DS4300** with 2TB, six HBAs, Windows/Linux host OS attachment, Storage Manager and fail-over software, and two eight-port switches: **\$77,741**

■ **IBM DS4100 array** with 8TB Serial ATA drives, six HBAs, Windows/Linux host OS attachment, Storage Manager and fail-over software, and two eight-port switches: **\$68,867**

SOURCE: EMC, NETAPP, IBM, HP

Additional hardware costs

■ **Host bus adapters:** **\$700 to \$1,200**

■ **Fibre Channel switches:** **\$3,500 to \$9,000 for entry-level models with eight to 16 ports. Models with 32 ports run from \$16,000 to \$22,000**

SOURCE: CDW CORP.

disk. It just depends on the components you put in there," Sink says. He adds that it's also important to project your data volume growth for about 36 months and make sure your equipment will meet your needs.

WAIT A MINUTE

Passmore acknowledges that midrange storage systems are a great buy. "They are cheaper on a dollar-per-gigabyte basis," he says. But, he warns, there are a lot of misconceptions about the true affordability of midrange storage systems, particularly when it comes to their ability to fulfill large enterprise needs.

"Midrange arrays are smaller and have less inherent horsepower than high-end arrays," Passmore says. "If you're building a large, complex environment, you'd need more of those smaller arrays, which means you'll have more to manage. You don't build volumes across arrays, you build them across a single array."

And unlike midrange arrays, high-end arrays such as EMC's Symmetrix, Hitachi's Lightning and IBM's Shark come with multiprotocol connectivity for Ficon and Escon mainframe connectivity as well as iSCSI. Midrange arrays are usually dedicated to one protocol only. The only exception to that rule in the midrange market is NetApp, which offers high-end Ficon, Escon and iSCSI connectivity on its FAS line of arrays, Passmore says.

Another area in which high-end arrays beat out midrange arrays is in asynchronous or synchronous long-distance replication of data, which requires consistency checks, or the ability to ensure that data sent across long distances is consistent with the original data.

In the past 18 to 24 months, vendors have pioneered significant advancements in long-distance replication in their high-end arrays. It's now possible for high-end arrays to maintain consistency across large applications running SAP or Oracle on 20 or more servers, says Passmore.

To maintain an application's performance over long distances, the application must go ahead of the remote copy of data, and that requires a substantial buffer or cache. "Midrange arrays can't do this," he says.

The bottom line, Passmore says, is that for many users that need shared storage, either midrange or high-end arrays fit the bill. But for very high scalability and performance, midrange systems continue to lag behind their bigger brothers. **55256**

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IDS Pays Off, Even if There's No Hacking

System shows its value again as the security team sets out to mitigate the effects of a nasty worm. By Mathias Thurman

WHEN I CAME INTO work after the weekend, a very interesting e-mail message was waiting for me. The message, with the subject line "Account Alert," appeared to be from our help desk. It requested that I read an attached document pertaining to my user account.

The attachment was named "account-info.exe." This was very alarming. We have invested heavily in various technologies to prevent e-mail with executable file attachments from making it through our external mail gateways, but it looked like one had gotten through. My fears were validated when others in the IT department said that they had received the same e-mail. Of course, a good percentage of the folks in the IT department know that executable file attachments should never be opened, since they are often used as vehicles for distributing malicious code. Unfortunately, there is apparently a substantial number of employees in our company who either didn't know this or were fooled into believing that the e-mail originated from a trusted source.

The timing of this message couldn't have been worse. As part of the process of synchronizing our user accounts, we have been sending out official communications to our users regarding the upcoming resetting of passwords. So users have grown accustomed lately to seeing important e-mail from the IT department. This e-mail didn't follow the offi-

cial company communications format, but a lot of users didn't pay much attention to that. The result: Lots of users opened the attachment, and their machines got infected.

After we analyzed the attachment, we realized that our network was infected with the W32.MytoB.DP@mm worm. This worm is nasty. It does a lot of the usual stuff, such as

adding entries to the host file, registry keys, services and so on. But it also includes its own mail relay, which allows it to find e-mail addresses, distribution lists and address books located in popular e-mail programs and send e-mail, including that executable attachment, to everyone it can find. In this way, it replicates itself. But W32.MytoB.DP@mm also attempts to open an Internet Relay Chat session within a certain chat room. If the worm is successful in connecting to the chat room, it sits idle, waiting for a command from the IRC server. This command can cause the infected system to download files or conduct other malicious activity.

I've seen such worms install keystroke-capturing programs and periodically send the key-

stroke information to the IRC server. That sort of activity wasn't observed in this case, but its potential to damage the company was still high.

The problem with worms like this is that traditional virus-protection software rarely detects them. We usually don't find out about worms or Trojan horses until we get a call from our network engineers complaining about excessive bandwidth or latency problems, or when the help desk informs us that it's getting bombarded by calls from employees whose desktops aren't working properly.

To deal with this latest worm, our intrusion-detection system guru simply looked for outbound, external connections to Port 4512, which is the rogue IRC port that we determined was waiting for infected machines to "call home." When we identified traffic connecting to that port, we could then trace the IP address back to a switch port. If the IP address was that of a desktop, all we had to do was disable the switch port until a help desk technician could be dispatched to remove the worm. The help desk put together a script that goes through an infected desktop and removes all the actions that the worm has initiated.

After this incident was somewhat resolved, I had an interesting conversation with a couple of my security engineers. We talked about the current use of the IDS. Several years ago, we deployed the IDS to watch for signs that a hacker was attempting to compromise our network. Among other things, we looked for various types of buffer overflow exploits, port scans, denial-of-service attacks and other attempts to take advantage of a publicly

advertised weakness in some application.

But I noted that in the past several years, our IDS has been used more for detecting policy violations (such as the use of peer-to-peer file downloading and chat rooms) and tracing malicious code (worms, Trojan horses and viruses). I couldn't remember the last time our IDS was used to catch a hacker targeting our company via a buffer overflow or other sophisticated attack. We still configure our IDS rule base to look for those types of signatures, but we really haven't seen anything substantial.

Most of the time, the worst thing that happens is that our external network is constantly being probed by hundreds of suspect IP addresses every hour. We used to try to contact service providers to let them know that someone within their network was probing us, but we never got any type of disposition, so we limit the complaints to only the top offenders.

Our IDS infrastructure currently monitors about 98% of our network. We are constantly getting calls from the network team, help desk staffers and desktop support people to assist them with monitoring and analyzing network traffic and to help them discover malicious activity on the network. The IDS might be our most valuable and prized piece of infrastructure, and it's probably saved the company hundreds of thousands of dollars in support calls and unneeded resources.

The next step is to get a robust event management infrastructure and automate much of what we do, so that we can offload a lot of this activity to the newly created security operations team. ▀

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias.thurman@yahoo.com, or join the discussion in our forum: QuickLink.s1590

To find a complete archive of our Security Manager's Journals, go online to computerworld.com/secjournal

SECURITY LOG

Security Bookshelf

■ *Layer 2 VPN Architectures*, by Wei Luo, Carlos Pignataro, Anthony YH Chan and Dmitry Bokotey (Cisco Press, 2005).

This is a timely release for us, since we're converting our network to Multi-protocol Label Switching. Although primarily focused on Cisco technology, the book is an easy-to-read reference on Layer 2 VPNs. It provides case studies, as well as shots of configuration screens and captures. I actually enjoyed the first five chapters, which provide well-written explanations of common standards, protocols and architectures. After you thumb through the MPLS chapters, you are guaranteed to understand this technology, from concept to real-world application. A great reference book for any network security pro.

—Mathias Thurman



IBM Pushes Use of Digital Certificates

IBM will try to encourage banks to make more use of digital certificates through a partnership with trusted identity company Identrus LLC. Identrus has certified Version 1.5 and higher of IBM's z/OS mainframe operating system. As a result, users of the software can act as their own digital certificate authorities, eliminating potentially costly middleman certifiers, said June Felix, general manager of IBM Global Banking.

Flaw in Acrobat

Adobe Systems Inc. has warned of a serious flaw affecting Acrobat Reader 5.x for Unix and Linux. The flaw leaves users open to attack via maliciously crafted PDF files, which can be spread via e-mail attachments and Web page links and used to take control of a system.



I couldn't remember the last time our IDS was used to catch a hacker.

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AND WELL-GUARDED

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at microsoft.com/security/IT**

- **Microsoft Windows XP Service Pack 2:** Download it for free and get stronger system control and proactive protection against security threats.
- **Free Tools & Updates:** Download free software like Microsoft Baseline Security Analyzer to verify that your systems are configured to maximize security. Manage software updates easily with Windows Server Update Services.
- **Microsoft Risk Assessment Tool:** Complete this free, Web-based self-assessment to help you evaluate your organization's security practices and identify areas for improvement.
- **Internet Security and Acceleration Server 2004:** Download the free 120-day trial version to evaluate how the advanced application-layer firewall, VPN, and Web cache solution can improve network security and performance.

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Microsoft

AJAX

DEFINITION

Asynchronous JavaScript and XML (AJAX) is an approach to developing Web applications in which client Web pages are modified asynchronously and incrementally rather than being replaced entirely every time an update is needed.

BY JAN MATLIS

ALTHOUGH THE ACRONYM AJAX is fairly straightforward, derived from Asynchronous JavaScript and XML, it's significant because it captures a paradigm shift in the delivery of Web page content.

The AJAX approach to Web content delivery speeds up the user interface. The long wait for an entire page to refresh from a Web server isn't necessary in an AJAX-based application. Only that part of a Web page that needs to be updated is

altered, and the update is done locally, if possible, and asynchronously. The user can continue to interact with the Web page while JavaScript on the client minimizes interactions

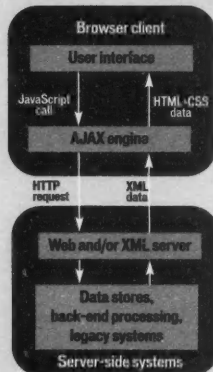
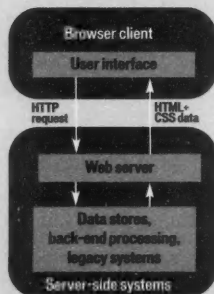
with the server, and information passing between client and server is done in the background.

For developers not yet using AJAX, any change to a Web page requires a full client/server interaction. For example, a request to insert a newly typed item into a list (say, an additional DVD selection into a Web shopping cart)

QUICK STUDY

Traditional Web Apps vs. AJAX

The traditional model for Web applications (left) compared with the AJAX model (right).



requires a series of steps: After the new item name (the DVL title) is entered into a form, it's passed back to a server. The server then generates a new Web page. That page is transmitted back to the client, and the client's entire Web page screen gets refreshed. The URL at the top of the Web page reflects the transaction that has just occurred.

Interact Locally

In contrast, in an AJAX-based Web application, the interaction looks like this: The user types a new item into an input box. JavaScript, running on the user's computer, inserts the item into the list and refreshes only a few lines of the Web page. The server is entirely cut out of the interaction, and the URL at the top of the Web page doesn't change.

Even if client/server interaction had been needed, say, to retrieve the latest discount price for the DVD, that could have been done interactively, and the response time of the user interface would have been more like that of a program running solely on the local machine.

The AJAX acronym was born on Feb. 18, 2005, when it first appeared in a paper titled "Ajax: A New Approach to Web Applications" [QuickLink a6430], which was written by Jesse James Garrett, a founder of Web consultancy Adaptive Path LLC. The term has generated a lot of buzz among developers and bloggers so far this year, but it's only the name that's new.

In his essay, Garrett points to existing Google applications — Google Groups, Suggest, Maps and Gmail — as examples of the new paradigm in Web interaction design. Google Maps doesn't jerk and stall as a user pans the field of view across an apparently limitless map. The older paradigm requires the user to click on an arrow in the requested panning direction, which is followed by an hourglass hiatus while the map server creates the desired view and downloads it to the local machine.

The following technologies and protocols used in AJAX had been around for a while before Garrett specified them in his essay:

- **XHTML and Cascading Style Sheets (CSS)** for presentation.
- **Document Object Model** for dynamic display.
- **XML and Extensible Stylesheet Language Transformations** for data interchange.
- **Microsoft's XMLHttpRequest** for asynchronous client/server

AJAX: MVC Redux

Some people who follow development trends bristle at the suggestion that AJAX is anything new, despite the recent coining of the term. For them, AJAX is just the most recent incarnation of a model-view-controller (MVC) architecture for building applications. The roots of MVC can be traced back to 1979, when Trygve Reenskaug, a researcher working on the Smalltalk language at Xerox Corp.'s Palo Alto Research Center, first described the architectural pattern and its benefits.

MVC separates an application's data model, user interface and control logic into three distinct components, or objects. This means that modifications to the view component (usually the user interface) can be made with minimal impact to the data model. The data model is the domain-specific representation of the information on which the application will operate.

The controller mediates between the data model and the view. It responds to events, which are usually actions by users, and changes the view or model as appropriate.

The primary benefit of the MVC approach is that it increases the responsiveness of the view component while maintaining the stability of the data model — no mean feat, given the event-driven characteristics of the modern graphical user interface.

Since it requires the separation of the model and the controller from the view component, the MVC design also promotes platform independence for programs. The programmer can implement the data model and the controller in a cross-platform language like C or C++. The toughest part of porting the application to a new operating system then becomes redesigning the view. Use of the OS-specific language is then limited to controller notification of user events and changes in the data model.

MVC and its offspring, such as AJAX, are viewed by many as the most promising means of unraveling the complexities of Web application development.

— Tommy Peterson

interaction.

JavaScript to run commands on the client machine.

Until recently, however, some crucial pieces weren't in place to bring the technologies together. As Adam Bosworth, vice president of engineering at BEA Systems Inc., wrote in a recent blog on the subject, "The physics didn't work in 1997." Without the wide adoption of broadband, Bosworth points out, downloading the required JavaScript for local control (often as much as 10,000 to 20,000 lines of code) took too long.

In addition, until a few years ago, processors ran too slowly for JavaScript. Even if the physics had worked, until recently the same code couldn't have run on all Web browsers, Bosworth says.

Finally, or perhaps most important, in Bosworth's estimation, personal applications like Google Maps and Gmail were in the minority of Web applications and were in less widespread use five or six years ago than they are today.

Some Limits

Not all applications may be right for the AJAX approach. Skeptics frequently cite "breaking the Back button" as a serious problem. Because AJAX allows Web pages to be modified locally and/or incrementally, clicking on the Back button doesn't necessarily return a user to the previous page. The Back button may take the user all the way back to the beginning of a long interaction — the one specified by the URL shown at the top of the Web page.

For the same reason, the URL at the top of the Web page doesn't completely specify the contents of a page, so it may be impossible to bookmark desired pages or share URLs so that others may see

the same Web content. And asynchronous updates, as blogger Alex Bosworth (son of Adam Bosworth) and others have pointed out, mean that a Web page could adjust its shape, layout or length

unexpectedly.

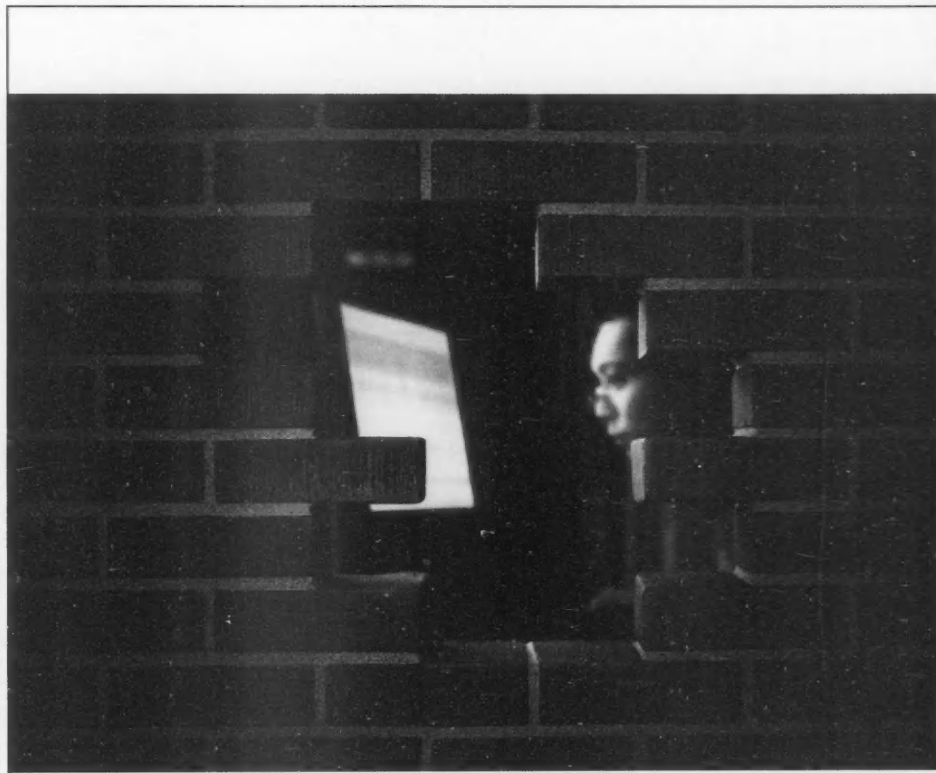
Despite those drawbacks, AJAX has generated real excitement with its promise of more-responsive Web interactions. Garrett ends his essay with this Utopian vision: "The

biggest challenges in creating Ajax applications are not technical. ... The challenges are for the designers of these applications: to forget what we think we know about the limitations of the Web, and begin

to imagine a wider, richer range of possibilities."

☎ 55262

Matlis is a freelance writer in Newton, Mass. He can be reached at jmtgpcmc@aol.com.



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BRIEFS

Calendaring App For Smaller Firms

■ Calendaring and scheduling software vendor Meeting Maker Inc. has released Meeting Maker for Outlook, which is designed to allow small and midsize companies to run Microsoft Outlook without using Microsoft Exchange servers. The release offers Outlook's standard calendaring capabilities and lets users schedule single or recurring meetings in real time, schedule resources required for a meeting and see calendars in multiple views, said the Waltham, Mass.-based company. The software starts at \$949 for a 10-user license.

Dell Adds Switch To Blade Servers

■ Dell Inc. has added McData Corp. 4314 Fibre Channel switches to its blade server line, the Dell PowerEdge 1855. The switch was designed to ease storage-area network deployment in blade server environments, said Dell. Fibre Channel traffic is aggregated in the switch from a daughtercard port on each blade server to four uplink ports that connect directly to Dell or EMC Corp. storage devices or to additional Fibre Channel switches. Pricing for a single switch begins at \$8,999.

SmartDB Releases Tool for Oracle

■ SmartDB Corp. in Menlo Park, Calif., has announced a new browser-based tool called Reportal. The software allows users of Oracle E-Business Suite applications to define queries and decide how and when query results are delivered, said the integration software maker. By creating an abstract layer of configurable business modules, SmartDB Reportal organizes complex data structures into meaningful "capsules" that are accessible to non-technical users. The product is shipping now and starts at \$30,000 per server.

CURT A. MONASH

More Data Makes Your Business Grow

THE JOB of IT departments can be concisely described as having two parts: managing data and advising business people about how the data could be used.

As a general rule, there's little question as to what data might actually be involved in either of

those functions. But the exceptions to that rule tend to be both intellectually stimulating and economically important. In surprisingly many cases, the use of new data sources can provide a huge boost to business profitability and success.

Examples abound in both the transactional and analytic arenas. On the transactional side, some of the biggest opportunities lie in the tracking of products and other physical objects via radio frequency identification (RFID) or, in some cases, more active mobile devices. Indeed, if you're in an industry such as retail, distribution or transportation, that's probably a top-of-mind issue for you and a major part of your company's medium-range capital budgeting. Also, companies in more and more industries are developing miniature commodity-trading desks and bringing in investment transaction data to support them.

Less obvious, yet potentially even more important, are the possible sources of new analytic data. There's data that's already available for you to collect, data that you can buy and entirely new data that you would have to create. There's conventionally structured data, unconventionally structured data and data that's barely structured at all. The possibilities are varied enough that if you don't take the time to think them through, you may well miss a company-changing opportunity.

In some cases, you just have to notice data that has already fallen into your



CURT A. MONASH is a consultant in Acton, Mass. You can reach him at curtmonash@comcast.com.

lap. Search-engine logs tell you of customers' questions and interests in their own words. General Web-visitor logs give you similar insight. You may have a lot of customer satisfaction and product-quality data sitting around to be text-mined from warranty claims, call center reports and the like. And if a solution could be found to the privacy issues, even more information

could be gleaned by voice-mining actual telephone conversations.

In other cases, you can obtain valuable data from third parties. The best-known example is consumer data from credit reporting companies, which can be used for a variety of CRM purposes; many other kinds of data can be used similarly. Away from CRM, medical researchers want to look across data banks of patient records to develop new treatment insights without the cost, delay or danger of conventional clinical trials. (The privacy problems around this kind of research can and will be solved soon.)

But the really mind-blowing possibilities arise when enterprises deliberately set out to create and capture data for the primary purpose of using it analytically. Here are some examples:

Loyalty cards, especially in gaming. The casino industry has been transformed by those cards you use to tell the casino what you're doing and to collect rewards. Both when you're on the premises and when you're home, casinos market to you very precisely based on that

information. Of course, this involves massive data mining, but a huge fraction of the casinos' profits comes from it.

Location-based analytics. There's something Big Brotherish about supermarket shelves that know who you are and make offers accordingly, but that technology is being tested and deployed today. Wide use of RFID will greatly expand its scope. Privacy concerns do need to be overcome, but experience shows that consumers can be bribed into giving permission for this type of effort in return for personally targeted marketing offers.

Extra customer feedback. Smart companies should and do knock themselves out to get extra feedback to use in CRM and product quality analysis alike. Here are some ideas for getting that feedback: extra incentives for submitting warranty/registration cards; online surveys with prizes/bribes for participating; outbound phone calls to customers; forums and other community-building efforts; and better customer service of any kind (online or over the phone), inducing customers to consume more of it and hence communicate better.

Price/offer testing. Marketers have long been disciplined to test multiple product prices and offers to see what is most successful. Analytics in support of these tests make the testing more valuable. You can't estimate demand elasticity if you make offers at only one price point.

These examples are concentrated in CRM and product quality for a good reason — those are the main areas of business where statistical analysis flourishes. As the scope of predictive analytics expands, the opportunities for profitable data-creation strategies will do so as well. **55395**

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| 8:30am to 8:40am | Introduction and Overview
Don Tennant, Editor in Chief, Computerworld |
| 8:40am to 9:10am | Trends in Enterprise Analytics:
An Industry Analyst's Overview
Keith Gile, Principal Analyst, Forrester Research |
| 9:10am to 9:40am | Case Study: SBC Communications
Renée Romano, Executive Director, Enterprise Business Intelligence Systems and Information Services, SBC Communications
Mike Cozzi, Senior Technical Director, SBC Communications |
| 9:40am to 10:30am | Transforming Enterprise Data Into
Actionable Business Intelligence
Keith Collins, SVP and Chief Technology Officer, SAS
Michael Tillema, Business Intelligence Strategist, Intel |
| 10:30am to 10:45am | Refreshment and Networking Break |
| 10:45am to 11:15am | Case Study: The Nature Conservancy
Connor Baker, Director of Business Information, The Nature Conservancy |
| 11:15am to Noon | Panel Discussion: From Gut Feel to Fact-Based
Decisions: Real-Life Business, Political and
Technology Lessons Learned on the Front Lines
of Enterprise Data Analytics
Moderator: Don Tennant, Editor in Chief, Computerworld
Panelists:
• Renée Romano, Executive Director, Enterprise Business Intelligence Systems and Information Services, SBC Communications
• Mike Cozzi, Senior Technical Director, SBC Communications
• Connor Baker, Director of Business Information, The Nature Conservancy
• Keith Gile, Principal Analyst, Forrester Research
• Keith Collins, SVP and Chief Technology Officer, SAS
• Michael Tillema, Business Intelligence Strategist, Intel |
| Noon | Program Concludes |

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Mike Cozzi
Senior Technical Director, SBC Communications



Connor Baker
Director of Business Information, The Nature Conservancy



Keith Gile
Principal Analyst, Forrester Research



Keith Collins
SVP and Chief Technology Officer, SAS



Don Tennant
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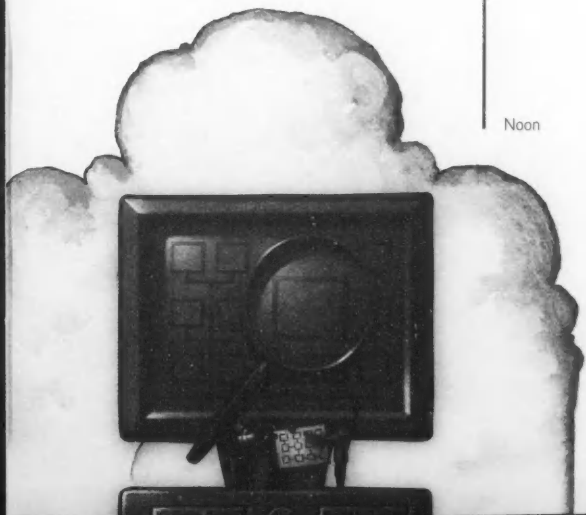
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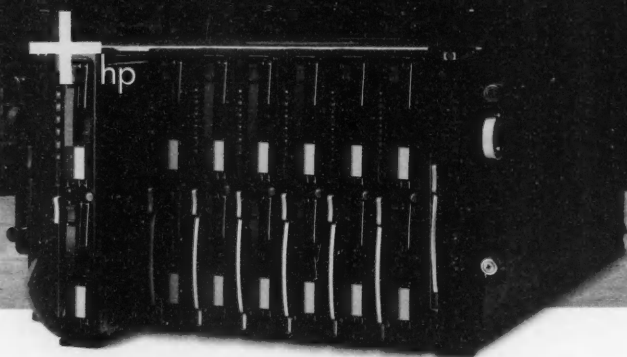
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IT MENTOR Grass-Roots Governance

The discretionary budget can be treacherous territory with no rules, no winners and lots of hard feelings between IT and business. John Sullivan of Reynolds and Reynolds explains how his IT group got a handle on it. **Page 42**



Career Watch

Computerworld Premier 100 IT Leader Jesus V. Arriaga offers advice on how to become a CIO; the hiring outlook brightens; and the ITAA reports that IT still lags in hiring women and most minorities. **Page 46**



OPINION A Separate IT Capital Pool Makes No Sense

Eliminating discrete capital allocation processes for IT and business is a boon to both, says Bart Perkins. Find out why. **Page 48**

After THE Fact

BY THOMAS HOFFMAN

A 'POSTGAME' PROJECT ANALYSIS BY
KEY PLAYERS IS WORTH THE EFFORT.

ASK MOST IT managers why their organizations don't regularly conduct postmortem reviews on completed IT projects, and the typical response is, "We'd like to, but we just don't have the time or resources."

But that hasn't stopped organizations such as the Chicago Mercantile Exchange and Solo Cup Co. from regularly reviewing at least a portion of their completed IT projects. And while some of the reviews are done to see if a project met its anticipated objectives, many postmortems are conducted simply to determine what the project teams could have done better.

In this age of austerity, either objective can be a win for IT as postmortems prove the business value of projects or boost continuous improvement efforts.

"Each year, you want to do better than the previous year" in terms of project planning and project portfolio management, says Carl Stumpf, director of project and financial controls for the technology division at Chicago Mercantile Exchange Inc. (CME).

But Stumpf is in the minority, according to Gartner Inc. Just 13% of Gartner's clients conduct such reviews, says Joseph Stage, a consultant at the Stamford, Conn.-based firm.

There are a variety of reasons why postmortems aren't conducted, and some of them are defensive. "If the projects didn't accomplish what you set out to do, no one wants to go back and disclose that," particularly if such discoveries end up negatively impacting a project manager's performance review, says Tom Bugnitz, a consultant at Arlington, Mass.-based

DAVID MULLENBACH



POSTMORTEM PLAYBOOK

WHY THEY'RE DONE: The reasons vary among organizations, but postmortems are often done at the request of business sponsors to determine whether projects met business goals. Sometimes they're launched by the IT department as a lessons-learned/continuous-improvement exercise. Occasionally they're initiated to get wayward projects back on track.

WHEN THEY'RE DONE: They're typically conducted 30 to 90 days after a project has gone into production.

WHO'S IN CHARGE: Generally, the IT department's project management office takes the lead.

WHO CONDUCTS THEM: Often, quality assurance managers or project managers who weren't involved in the project guide the effort.

WHO IS INTERVIEWED: If the postmortem is technically focused, the interviews are usually restricted to IT project team members such as developers, testers and project leaders. If the postmortem is focused on the achievement of business goals, business sponsors and users are often included as well.

WHAT KINDS OF QUESTIONS ARE ASKED: Was the project delivered on time, on budget and within scope? Did it meet the business sponsor's expectations? What went well? What didn't? What could have been done better?

HOW LONG DOES IT TAKE: It's usually completed within a few weeks.

— Thomas Hoffman

Cutter Consortium and a partner at The Beta Group, a St. Louis consulting firm.

Ironically, the IT groups that need postmortems the most are probably the least likely to perform them. The notion of conducting a postmortem "would be viewed as a time sink" for an IT organization with immature project management capabilities, since it wouldn't be able to fully grasp the value to be gained, says Margo Visitation, an analyst at Cambridge, Mass.-based Forrester Research Inc.

Seeking Returns

But postmortems can pay off for companies that expend the time and resources to execute them properly.

When the CME, a predominantly electronic futures exchange, went public in 2002, that placed "a lot of the risk on our side" in IT, says Mark Bennett, associate director of the project and financial controls group. To help mitigate some of that IT risk, the CME began conducting postmortem reviews on its two-dozen largest IT projects in late 2003.

The exchange uses enterprise portfolio management software from Newport Beach, Calif.-based Artemis International Solutions Corp. to help project teams go back and evaluate their original objectives, risks and assumptions and determine whether projections for resources, capital and contractor fees were estimated accurately, says Bennett. Those steps enable the CME's project sponsors to better understand the financial constraints the technology division's project group faces and help them to better balance risk and prioritize projects.

The reviews have also helped the CME's project teams determine how to improve future iterations of software development projects, says Peter Barker, director of interest-rate products for the exchange and a business sponsor of IT projects.

He points to an enhanced options system that went live last August that enables the exchange's market makers to trade euro/dollar options on computer screens. One of the "thousand little things" that have come out of that project's review were recommendations made by market makers to improve an application programming interface that allows them to send "streaming" prices to trading screens, says Barker. Those improvements were put into production in February, he adds.

But sometimes it takes a while to get the postmortem process right. Meijer Inc., a Grand Rapids, Mich.-based chain of grocery stores, began conducting postmortem reviews on some of its IT projects after it formally launched a program management office (PMO) seven years ago, says IT program manager Jim Morse. But the practice was abandoned after a few years when the review process became "too picky," he recalls.

"We were trying to do metrics and measures and turn it into a scorecard, and it got kind of scary," says Morse. That's because the review process at that time was focused too much on metrics and failed to evaluate some of the softer but equally important aspects of project success that can't easily be measured, such as trust, commitment and reliability, he says.

THE DRILL

■ Be sure the reviewers understand the value of the exercise and what the expectations are.

■ Design the reviews

to be both subjective and objective.

■ Make sure the facilitators steer clear of finger-pointing.

■ Have an independent project management office supervise the reviews. Otherwise, peer reviews tend to favor the styles of the reviewers.

■ Include project team members, end users and business sponsors among the interviewees.

■ To avoid surprises during the review, conduct periodic audits while the project is under way, focusing on aspects such as the timeline, budget and scope.

■ Collect information throughout the project life cycle to help lighten the load at review time.

— Thomas Hoffman

The project reviews have since been restarted and are now focused on more-qualitative measures: what went well, what didn't go well, what could have been done better and what steps could have been taken to improve a project's quality.

Meijer's PMO conducts postmortems on only some of its IT projects, since "we just don't have the bandwidth" to examine all of them, says Morse. Sometimes they're done at the behest of senior management to determine whether a big project met its business objectives. Morse will also occasionally conduct a review of a project in progress if he thinks it's running off track.

No Scapegoats

One of the big challenges in postmortems is to convince project managers that they aren't being made scapegoats for problems that might have arisen.

"The first reaction is, 'Oh, my project is a failure and now they want to nail me,'" says Morse. "But it's not an 'I gotcha' game." Used properly, postmortems are an opportunity to review the strengths and weaknesses of how a project was handled and learn from them.

IT project teams at Solo Cup started doing postmortem reviews two years ago on roughly 20% of the company's IT projects. The reviews give IT a "grass-roots perspective" on problems that have cropped up and help to determine what could have been done better, says Richard Wolfson, senior manager of IT quality assurance at the Highland Park, Ill.-based maker of disposable tableware.

At Solo Cup, the quality assurance person who is assigned to the project runs the review, says Wolfson. Most of the reviews examine technical issues: Was project planning done effectively, and was it well coordinated with business users? Did testing follow the proper procedures? Were system defects caught quickly during the development phase and resolved?

If there are only technical issues to resolve, business sponsors are typically left out of the review, says Wolfson. But in about a quarter of the cases, their input is expected to help, so discussions with the business sponsors are included as part of the process.

The CME's Stumpf says that aside from helping to mitigate IT risk and improving IT product iterations, his reviews have yielded additional benefits, including increased visibility for the IT department.

"There's a subtle benefit to it," he says. Business managers buy into IT projects much more, because postmortems give business sponsors a clearer picture of what the IT project group is doing.

Postmortems can also bring unexpected benefits. Last year, Meijer's PMO reviewed a big replenishment system project. The review included interviews with the vendors involved. And although its results weren't particularly surprising, it did lead to changes in relationships with some of the vendors, says Morse.

But perhaps the most important benefit is one that occurs before the postmortem even begins, says The Beta Group's Bugnitz:

"It forces people to place greater attention on achieving the desired benefits at the front end of the project." ■ 55229

INSTANT REPLAY

Royal Caribbean has opted against conducting postmortems in favor of phase reviews throughout each project.

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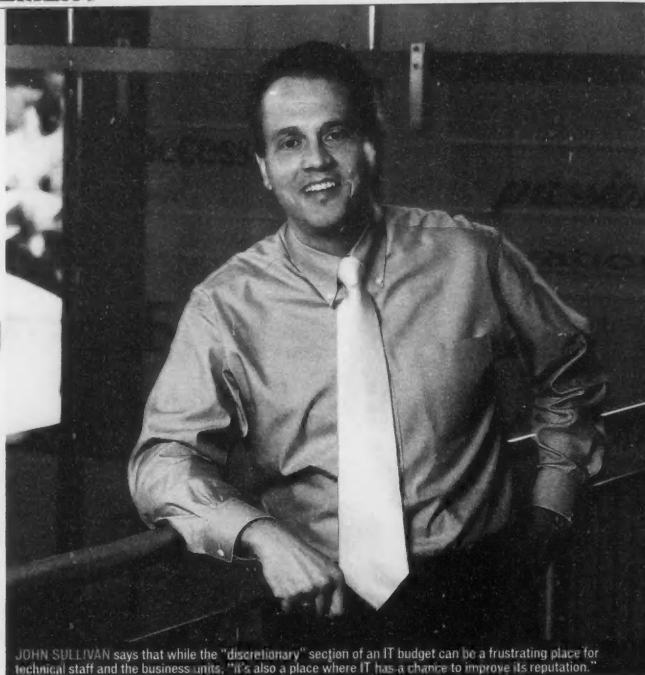
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GRASS-ROOTS Governance



JOHN SULLIVAN says that while the "discretionary" section of an IT budget can be a frustrating place for technical staff and the business units, "it's also a place where IT has a chance to improve its reputation."

The discretionary budget is a no man's land that can breed hostility between IT and business. Here's how one IT group brought order to the chaos. By John Sullivan

BETWEEN the large strategic projects and ongoing support in your IT budget is the "discretionary" section. The middle is often a safe place to be, but not so in the IT budget. This section funds business requests that occur throughout the year, things like creating reports, changing screen layouts or building an interface between two systems. While the middle can be a frustrating place for technical staffers, it's also a place where IT has a chance to improve its reputation.

In many companies, the consolidation of IT staffs into smaller, centralized groups has made discretionary work a big issue. Business units that no longer have dedicated IT groups must com-

pete for staff time to implement discretionary projects. The IT staff needs to address these requests while also implementing strategic projects and supporting current applications. The result is often benign neglect, with the IT staff delaying its assessment and implementation of requests and business units feeling stifled and ignored.

What's needed is "grass-roots governance," a system for receiving and processing discretionary work. Here's how we created a governance structure for eliminating weak and unaligned discretionary IT projects while helping to identify and implement effective ones.

ELIMINATE THE OLD. Our requests for discretionary work were informal and tended to evolve through a series of

Continued on page 44

A black and white photograph of a man in a dark suit, white shirt, and dark tie, walking towards the camera. He is wearing boxing gloves on both hands. He is standing on a concrete walkway in an industrial facility, with large pipes, valves, and a diamond-shaped warning sign visible in the background. The IBM logo is in the top left corner.

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difficult and inefficient meetings, phone calls and e-mails. There was no process or criteria to use in judging requests, and business customers considered any attempt to reject one or lower a request's priority to be hostile.

We first consolidated all requests and solicited any pending requests that weren't yet submitted. Then we eliminated about a third of them because they were redundant, outdated or irrelevant. This created a starting point for both IT and business staffs.

EXPLAIN YOUR REASONING. The business people remembered earlier attempts to rank and implement technology projects, and those memories weren't good, partly because early efforts relied excessively on executive-level communications. This time, we targeted our communications to the people requesting our services — the middle management and staffs of the business units.

We explained our need to better allocate time, money and staff and our mutual obligation as employees to ensure that all projects aligned with company priorities. To get a consistent set of information from all business units, we told them we needed to implement a new process and would require a standard form for all submissions.

KEEP IT SIMPLE. We designed a basic form — a Word document laying out the minimum information we needed to objectively evaluate each request. (We later migrated this to an online system.) The form required the requester to explain how the project would increase revenue, reduce costs, comply with the law or simplify doing business.

SELL IT. Then we sold the benefits of the new process to the business by making the following points:

- It would become the standard way for business people to submit work, eliminating their confusion and frustration over not knowing how to present their requests.
- It would save both groups time by eliminating the meetings and e-mails previously required to define discretionary work.
- It would provide them with an official acknowledgment that IT had received and was considering their requests, eliminating the need for constant follow-up meetings to ensure that their projects were addressed.

We told the business people that we needed requests for all work, including projects that they simply assumed would get done. This process forced the business side to recognize the workload impact of annual projects that were previously an invisible contribu-

tion by IT, like generating W-2 forms.

MAKE THEM PARTICIPATE. Making business staffers write their own work requests was a big change. We explained that this wasn't an attempt to dismiss their needs but a way for them to justify the work they wanted us to do. Using a form also made them define the problem instead of specifying a solution.

To assist them, we created seven general categories, or queues, called IT Programs and appointed a project manager as a single point of contact for each one. The queues are broad enough to encompass several departments. For example, Finance includes areas like budgeting, accounts payable and accounts receivable. Associate Services includes human resources, payroll and the company stock plan. Having this queue structure allowed us to receive and process work in a more uniform manner without creating a fragmented bureaucracy.

ASSIGN OWNERSHIP. Each project manager "owns" a queue and is responsible for receiving and managing work requests as well as leading a monthly meeting with the business people.

During the meetings, representatives of the business staff and technical managers from IT review projects.

They look at the pool of requests and consider factors driving each one from both a business and an IT perspective: internal deadlines, legal changes, resource availability and funding, among others. They reference budgets and technical road maps to justify the decision to implement or reject the request. In almost all cases, this team decides the priority of each request, seeking management guidance only on the rare occasions when it's needed.

The standing agenda includes a discussion of future needs so we can adjust staffing plans in advance instead of reacting to unexpected requests. This also allows the business people to see the effects of additional work on current priorities.

TAKE IT ON THE ROAD. We introduced the process to the business through a series of presentations, inviting anyone who might ever submit a request.

We explained what we were doing and why and gave a step-by-step example of how to complete a request. We gave them our start date, and from

that date forward, we accepted only requests made with the new form.

MAINTAIN THE SYSTEM. We review the project list in our weekly IT team meeting. The assigned staffer updates the online form and the system assigns it a status of "submitted." As the request moves through the system, the status changes automatically until the work reaches a state of "completed" or is at any point "rejected." It's important to keep the information current, because an outdated status damages our credibility with the business units.

FOLLOW UP. After we complete a discretionary project, we send a survey asking the requester to rank our performance in these five areas on a scale of 1 to 5:

- Were you satisfied with the product/service delivered?
- Were the benefits/desired outcomes achieved?
- Was the product/service delivered on schedule?
- Did the IT team member demonstrate necessary skills?
- Was the IT team a professional and effective business partner?

We also include a text field to allow responses to this request: "Please describe what the IT team could do to improve its performance in delivering future work requests."

Results from this survey have been overwhelmingly positive and provide good feedback on individual performances. They have made previously unknown IT accomplishments visible to the business and IT management. They are proof to management of our improved relationship with business units and the improved perception of IT value. They help justify the time required to run the system, and the accolades give the IT staff a morale boost.

ALLOW THE SYSTEM TO EVOLVE. Over time, we've added and modified field contents to make the system more effective. We've experimented with naming conventions, classifications and rankings as part of a continuing effort to better identify and track priorities. Some changes worked; some didn't.

We're still trying. We haven't yet found the perfect system for discretionary requests, but we now have one that works pretty well. It has improved our business relationships, our reputation and our morale. And it has again made the middle a safe place to be. **55377**

Sullivan is an IT project manager at The Reynolds and Reynolds Co. He can be reached at john_sullivan@reyrey.com.

GOOD Form

Don't have a long debate about how to classify your work requests. Get fast agreement on some basic information and get started. Terms and categories can evolve as needed. Here's a list of what we require:

HEADLINE:	A one-line summary of the requested work that serves as its title — for example, "Add Middle Initial to Buyer Name." Even though an automated system assigns a number to the work request, this field becomes the common name and is used on reports. Hint: Have your business people write the description (see below) before they write the headline; they will find the title within their description.
PRODUCT:	A broad classification for the area in which the work occurs. These already existed for the products we sell, so we created "INTSYS" as a global category for our internal systems.
APPLICATION:	A subset of the product category, this is the specific area in need of work. It might be Accounting or Finance. Our internal systems are all handled by a unit called the Competency Center, so we created "COMPCTR" for all inside applications.
COMPONENT:	A more detailed subset of categories for our internal systems. For example, work for our SAP system can be subclassified as "SAP_AR (accounts receivable)" or "SAP_PAYROLL."
SUBMITTER:	The person making the request.
DESCRIPTION:	What you want to be done. "Fix it" isn't a specific enough description, so in our "road show" we suggested starting with the phrase "ability to," as in "Ability to sort by product number."
BUSINESS JUSTIFICATION:	Why the company needs this work done. For example, "It increases sales, reduces cost and improves service."



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Career Watch

ITAA: IT Doesn't Look Like America

Most minorities poorly represented; women's presence has fallen since 1996

THE PERCENTAGE OF WOMEN and most racial minorities in the U.S. IT workforce continues to lag the percentages of the national workforce, according to a study released last month by the Information Technology Association of America.

According to the ITAA report, "Untapped Talent: Diversity, Competition and America's High Tech Future," Hispanics, who make up 12.9% of the U.S. workforce, accounted for only 6.4% of the IT workforce in 2004. The figure represents a slight increase from 5.3% in 1996. Blacks, who accounted for 10.7% of the U.S. workforce in both 1996 and 2004, have more proportional representation in IT than Hispanics, at 8.3%. But that was a decline from 10% of the IT workforce in 2000. However, that doesn't mean the U.S. IT workforce is whiter than the overall workforce: There are 6.6% fewer whites in the IT workforce than in the overall workforce. One of the greatest differences between the IT workforce and the country as a whole may be in representation by Asians. They account for 4.3% of the general U.S. workforce but 12.1% of the IT workforce.

Another big difference is the percentage of women. In 2004, according to the ITAA study, women made up 32.4% of the IT workforce in the U.S. That represents a decline from a high

of 41% in 1996. In the overall workforce, the percentage of women rose slightly, from 46% to 46.5%. The ITAA attributed the decline, in large part, to the fact that one out of every three women in the IT workforce falls into administrative job categories, which have shrunk significantly in recent years.

In a press release, ITAA President Harris N. Miller said the U.S. "can ill afford to miss out on anyone with the right aptitude, skills and motivation to succeed in technical fields." To increase the number of women and minorities in IT, the organization called for the following:

A stronger commitment from corporate leadership.

Increased corporate outreach and mentoring.

Stronger partnerships between companies and colleges and universities.

More-flexible work arrangements for IT workers.

Base: Data in the ITAA's report is based on the U.S. Bureau of Labor Statistics' Current Population Surveys.

ASK A PREMIER 100 IT LEADER

Jesus V. Arriaga



TITLE: Vice president and CIO

COMPANY: Keystone Automotive Industries

Arriaga is this month's guest Premier 100 IT Leader, answering a reader's question about landing a CIO job. If you have a question you'd like to pose to one of our Premier 100 IT Leaders, send it to askaleader@computerworld.com and watch for this column each month.

I have a bachelor of science degree from West Point and a master of science degree from Johns Hopkins. I left the military after seven years. I have been a Big Five consultant, network security engineer and software developer. My goal is to become a CIO, but I don't have anyone to advise me on my next move. Any suggestions? The day I set my sights on the CIO position, I determined to put a plan in place toward that goal. What I can offer you are my experiences and what I did to prepare myself for the day that office became available to me.

I quickly learned that to be an effective CIO, I would need a balanced skill set in both technical- and management-related areas. I had the technical area covered because I knew I was strong in both infrastructure and

software engineering. But management skills set you apart as a candidate for the CIO seat. As IT people, we can be pigeonholed as the "computer guy." Take management courses and read books on management and leadership principles. You can learn a lot that way.

As you learn, see what you can do to get involved in management-related issues at the companies you work for. I sought out opportunities to participate in meetings and discussions outside of the technical arena. The beauty of IT is that we touch every area of an organization. Departments and business unit owners need IT staff involved to assist with the planning and decision-making process. Most likely, your company's department manager, director or CIO is already involved at this level. Offer your services and become a participant in these meetings and take on additional duties that will allow you to demonstrate the skills you are learning. As you get involved, if there is something you don't understand, don't be afraid to ask questions. Participating at this level helped further solidify my knowledge and understanding of management principles. I also started to get a better understanding of what it takes to run a company.

Having one mentor, or more, who can help guide you through the executive management forest is also an important part of the building process. Although it's a plus if this person is a CIO, what's important is that he is in an executive management role with proven experience that he can share. If you don't know anyone, attend computer conferences where you can meet CIOs. Ask them how they became a CIO. You might be surprised; many are open to sharing their experiences without reservation. One or more of the folks you meet may be open to mentoring you, even if it means just being available to correspond on a regular basis. **55230**

Hiring Outlook

DICE INC. is reporting significant increases in job postings throughout the technology employment market. Since the beginning of the year, postings on Dice.com have risen 20% to 69,957. Much of this growth can be attributed to strong gains in certain metropolitan areas: Philadelphia is up 41%, New York 38%, Boston 36% and Dallas 35%.

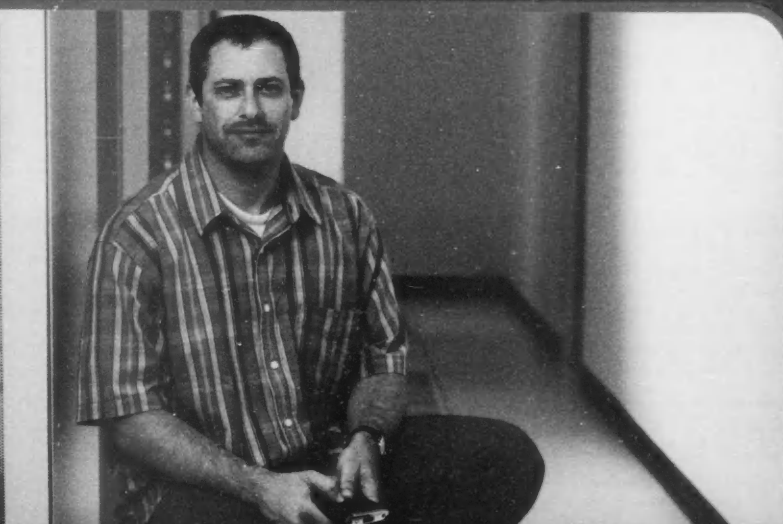
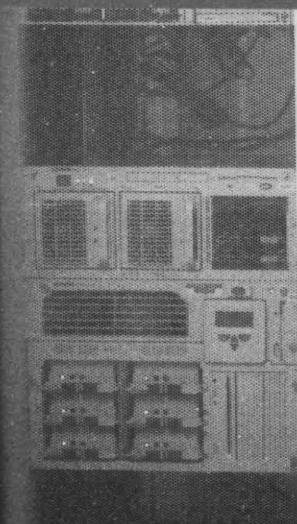
Requests for project managers have also shown strong growth since January, rising 42% to 9,811 postings. Demand for programming skills continues to grow this year as well, with .Net requests increasing 52%, HTML 38% and XML 37%. Meanwhile, the demand for people with Perl experience fell 12%.

NUMBER OF CONTRACT VS. PERMANENT POSITIONS ON DICE.COM AS OF JUNE 1

CONTRACT: 28,782 PERMANENT: 45,926

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EXEC TRACK

Vielehr Tapped for CIO Post at D&B

Global information provider The Dun & Bradstreet Corp. has named BYRON C. VIELEHR CIO. Vielehr joins the Short Hills, N.J.-based company from NorthStar Systems International Inc., where he served as president and chief operating officer. Previously, Vielehr served as chief technology officer in the private client group at Merrill Lynch & Co., and earlier he was CTO and global head of e-business for Merrill Lynch Investment Managers.

Spratt Named CIO at McKesson

McKesson Corp., a health care services and IT company in San Francisco, has appointed RANDALL N. SPRATT CIO. Spratt replaces Cheryl T. Smith, who left the company in May. He will report to Chairman and CEO John H. Hammergren and will serve on McKesson's executive committee. Spratt has been with McKesson for more than 18 years, most recently as chief process officer for McKesson Provider Technologies, the company's medical software and services division.

Pieroni CIO at Aon

Chicago-based Aon Corp., a provider of risk management services and insurance, announced the appointment of BILL PIERONI as global CIO. Pieroni joined Aon from IBM, where he was head of the global insurance industry practice.

Hiniker Appointed CTO at Quepasa

Quepasa Corp., a Phoenix-based provider of online products and services to Hispanic and Latino users, has named AARON HINIKER CTO. Hiniker will lead Quepasa's technology group as well as its near-shore development capabilities, which are provided via wholly owned subsidiary Quepasa.com de Mexico SA.

BART PERKINS

A Separate IT Capital Pool Makes No Sense

MANY CORPORATIONS separate the allocation of IT capital from the process that allocates corporate capital in general. This approach is misguided. Corporations don't have IT capital and non-IT capital. Capital should be allocated to the programs or projects with the highest return to the corporation (with obvious exceptions, such as regulatory compliance and not-for-profit endeavors).

All capital allocations should come from a single pool. This approach allocates capital more effectively. It facilitates portfolio management by evaluating all proposed projects together. It allows the company to allocate capital in accordance with corporate strategy while balancing risk and skills across the enterprise. A single pool of capital will also accomplish the following:

- **Establish corporate priorities.** Wrestling with a single pool of capital forces the executive team to discuss and agree on corporate business priorities. This can help you avoid a situation like the one a retail client of mine found itself in. The company had separated IT investments from corporate funding for new-store construction. The committee approving store funding never considered IT projects as alternate investment opportunities. As a result, the client failed to invest in several IT projects that would have had a higher return than building new stores.

- **Facilitate risk management.** High-return programs are often very risky, and most companies have a limit on the level of risk they're willing to undertake at once. They may choose to defer some high-return programs if the overall risk profile gets too high. A single pool of capital makes that easier to gauge.



BART PERKINS is managing partner at Louventy, LLC-based Leverage Partners Inc., which helps organizations invest well in IT. He was previously CIO at Tricon Global Restaurants Inc. and Delo Food Co. Contact him at BartPerkins@LeveragePartners.com.

- **Exhibit fiduciary responsibility.** Shareholders expect companies to invest their capital where it will provide the highest return, regardless of arbitrary corporate divisions or internal politics.

- **Improve the quality of business cases across the corporation.** Allocating capital from a single pool provides consistent criteria for evaluating programs and making trade-offs. Each business case must be robust enough to withstand scrutiny at the corporate level. This forces all programs to be better defined, planned and estimated [QuickLink 54603].

- **Involve IT early in the project life cycle.** Having a single pool of capital helps prevent IT from being excluded from "business" projects. One company built a number of new manufacturing plants, each with a different IT base. Since new plants weren't considered IT projects, the IT organization wasn't involved until construction of the plants was well under way. IT never had the opportunity to suggest a common platform for the manufacturing systems. As a result, the company was left with a chaotic and unsupported IT infrastructure. This unnecessary and expensive mistake could have been prevented if IT had been part of the capital allocation process.

- **Help demonstrate IT's value to business initiatives.** Virtually every IT project is really a business program with an IT component. Even most infrastructure projects are really undertaken to improve the support provided to the business as a whole. Funding from a single pool of capital clearly demonstrates that IT support is integral to the business. (This is especially useful at companies that don't value IT's contribution appropriately.)

- **Change the CIO's role in the funding process.** With one capital pool, the CIO should no longer be the only voice arguing for IT funding. In most cases, the justification should fall to the executive sponsor of the corresponding business initiative. Similarly, many CIOs currently run the allocation process for IT capital. With a single pool of capital, the executive who oversees corporate capital allocations, typically the CFO, will manage the entire allocation process. (In companies with difficult political situations, an outside consultant may be hired to establish the new allocation process and ensure that it's impartial.)

- **Remove arbitrary limits on IT capital.** When the capital pool available to IT becomes the entire capital pool of the corporation, specific limits on IT capital are essentially eliminated. In theory, as long as the proposed programs will generate a high enough risk-adjusted return, the corporation should fund them even if it has to borrow the capital.

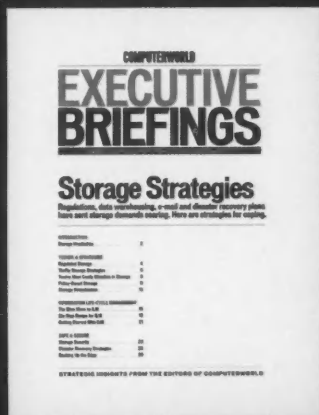
A single pool of capital ensures that IT program funding is based on business benefits, not technical merits. This approach will provide better IT support for your company's business initiatives, so persevere beyond the politics and push-back. Funding from a single pool of capital will leverage your company's available capital resources to provide the best possible return. **55114**

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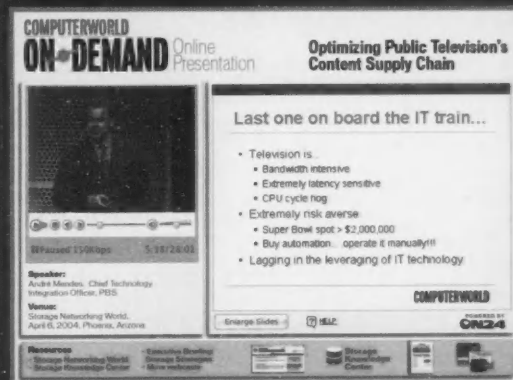


Get Smart About Storage

This new report offers practical advice about saving money, protecting data and implementing information life-cycle management.

store.computerworld.com/re/storage01.htm

Webcast:



Storage - Optimizing Public Television's Content Supply Chain

In this webcast from Storage Networking World, André Mendes of PBS discusses some of his organization's unique storage, distribution and delivery issues.

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Software Engineers: Research, design, develop, test, & recommend software requirements for E-commerce database applications. Use Oracle, Java, Perl, XML, Solars, Web logic, C++ & current Web Technologies in Windows, Unix, and Linux environments. Need B.S. in Comp. Science or Engg. or related and 2 yrs of exp.
Programmer Analysts: Design & develop Enterprise Resource Planning, Customer Relationship Management, ASP, Datawarehouse applications. Use current web technologies, web services, Stored procedures and SQL. Work in Unix Environment and Unix Shell Scripting. Need 2 yrs of exp. Send resume to: HR Manager, OmniSoft, Inc., 930 Mason St., Dearborn, MI 48124 or via e-mail at: sreenivas@omnisoft.com.net

SALES SPPT ENG'G
Sell CTI products to customers. Req'd: 5 yrs exp. in job. Resumes to: NICE Systems Inc. 301 Route 17 North, 10th Floor, Rutherford, NJ 07070. Attn: G. Farese, Ref 14.

RSCH & DEV. MGR
- Mge comp. technology use w/ emphasis on rsch & devlp new products. Req'd: 4 yrs. exp. Structured Web, Inc. 110 B Meadowlands Parkway, Secaucus, NJ 07084 Attn: D. Nissan.

IMP. ENG'G
Dsgrn, implement, & test CTI products at client sites. Req'd: BS & 3 yrs. experience. Willingness to travel 80% of time. Resumes: Nice Systems, 301 Route 17 North, 10th Floor, Rutherford, NJ 07070. Attn: G. Farese, Ref 13.

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Systems Analysts: Research, design, develop, test, & recommend software requirements for E-commerce database applications. Use Oracle, Java, Perl, XML, Solars, Web logic, C++ & current Web Technologies in Windows, Unix, and Linux environments. Need B.S. in Comp. Science or Engg. or related and 2 yrs of exp.
Programmer Analysts: Design & develop Enterprise Resource Planning, Customer Relationship Management, ASP, Datawarehouse applications. Use current web technologies, web services, Stored procedures and SQL. Work in Unix Environment and Unix Shell Scripting. Need 2 yrs of exp. Send resume to: HR Manager, Subhashini Software Solutions, Inc., 930 Mason St., Dearborn, MI 48124 or via e-mail at: sreenivas@subhashini.com.net

Business Application Specialist needed in Jacksonville, FL. Bachelors in Information Technology or related field plus 2 years experience required. Fax resume Attn: H. Ricker at (904) 928-8783 or mail to International Paper Attn: H. Ricker 4600 Touchton Rd. East, Bldg 100, Suite 500, Jacksonville, FL 32246.

Programmer Analyst needed w/2 yrs exp to design, develop & maintain client/server & n-tier based applic. using Delphi, Object Pascal, C, C#, COM/DCOM, COM+, XML, SOAP, T-SQL & Sybase SQL Anywhere. Mail resumes to: Triple Point Tech., Inc., 301 River-side Ave., Westport, CT 06880. Job Loc: Westport, CT or in any unanticipated locations in U.S.A.

Systems Analyst needed w/ Bach or foreign equiv. in Comp. Sci. or engg or math & 1 yr exp to dsgrn, dev, test & implmt Oracle Applic ERP & CRM. Analyze user reqmts to automate & improve comp system its Oracle ERP & CRM. Dsgrn, dev & deploy customizations using Oracle Jdvpr. Perform conversion of data into Oracle applic. using SQL Loader, Data Loader on Win 2000, HP-UX, Sun Solaris platforms. Res to: Optima Technology Partners, Inc., 9 Mount Pleasant Tpk, Ste 103, Denville, NJ 07834. Job loc: Denville, NJ or any unanticipated locs in US.

Integ Enterprise Consulting, Inc.
seeks: **System Analyst** in our Newark, NJ/Under close supervision: Design/develop software applications, graphics user interfaces etc. Administer, manage & support Windows NT/ 2000 based networks, database systems, web servers, email servers, data collection systems etc. Install/configure/support common application & networking software, computer hardware, operating systems, peripherals etc. Knowledge of developing applications and graphical user interface using VB, ASP, configuring and supporting Windows NT/ 2000 based networks, database management systems, MS SQL Server, SQL queries, views, and stored procedures. Install, configure and support common application software. Must have MCSE, Bachelor's degree in Computer Information Systems or related field, and two years relevant experience. Resume to: Aida Malik, Integ Enterprise Consulting, Inc., 58 East Park Dr., Newark NJ 07102.

Hibachi Chef (Toms River): Prepare, season, and cook, hibachi dishes such as vegetable, meats & seafoods adcg. To recipes or/per cust. Order, demonstrate cooking technique to the customer \$21.56 pr/hr. 2yrs exp. Fax Res. (732) 281-1233 Attn: Patrick Chu.

Computer Software Engineer w/exp. in designing questionnaire software systems. To work in Chamblee, GA. Send resume to Michelle Lehtonen, SAIC, 1710 SAIC Drive, MST 1-2-1, McLean, VA 22102. Must ref job code GW120392.

Computer Professional NY based IT firm, Jr. Level Positions Programmer Analysts, Software Engineers, Systems Analysts, Database Administrators to Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Sr. Level Position, IT Manager, MIS Manager, ITS Director needed to Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming. Apply with 2 copies of resume to: H.R.D. Jean Martin, Inc. 551 Fifth Avenue 14th Fl. New York, NY 10176.

Systems Analysts
Design, develop & implement Oracle ERP/MFG/CRM/PROJECTS applications on Oracle databases. Req. 2 yrs of exp. Send resume to: Technosol Technologies LLC, H.R. 2606 Peninsulas Dr. Missouri City, TX 77459 or email: technosol@technosoltech.com.

DCSE, Inc., located in Aliso Viejo, CA, seeks a **Software Engineer**. The position requires a Masters Degree in Computer Science or Computer Engineering and 8 months experience in Operations Analysis, Programming and ArcIMS Programming. Fax resumes to: Masoud Hosenyi, VP/CFD at 949-586-8141 or mail resumes to: DCSE, Inc., 95 Argonaut # 260, Aliso Viejo, CA 92656 Attn: Masoud Hosenyi.

Technology Management Concepts, located in Los Angeles, CA, seeks a **Systems Analyst Consultant**. The position requires a Masters Degree in Management of Information Systems and 2 years experience in Complex Problem Solving, Troubleshooting and Monitoring. Fax resumes to: Jennifer Harris, Director of Consulting at 310-559-7675 or mail resumes to: Technology Management Concepts, 3000 S. Robertson Blvd., Suite 250, Los Angeles, CA 90034, Attn: Jennifer Harris.

Computer & Information Research Scientist to work in IT laboratory setting. Digital imaging and printing experience a must. Send resume to Patricia Schoof, Shutterfly, Inc., 2800 Bridge Parkway, Redwood City, CA 94065. Must reference job code #CIRS. EOE.

Computer - E4Site Inc., located in Torrance, CA, seeks a **Programmer Analyst**. The position requires a Bachelor's Degree in Computer Information Systems or equivalent and 1 year of experience in Programming, Complex problem Solving and Technology Design. Fax resumes to: Manoj Narang, Resources manager at 310-326-6589 or mail resumes to: E4Site Inc., 1601 Lockness Place, Torrance CA 90501 Attn: Manoj Narang.

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UCITA

cerned about it," said Kinstlick, who maintained that stopping UCITA wasn't enough.

"If there is a void and UCITA is the only thing to take the place of the void, this could end up being the model almost by default rather than choice," she said.

UCITA is a software licensing law that specifies terms and conditions for licensing contracts. Under the act, unless the parties agree otherwise, the default terms apply.

Its supporters argued that UCITA would provide a legal framework for online commerce. Opponents said the default rules favored vendors and created potential perils for corporate users, such as allowing vendors to knowingly ship defective products.

Virginia approved the law in 2000, and Maryland quickly followed. But opponents — especially those in the financial services industry — joined the state-by-state battle to block further adoptions.

In August 2003, the law's legislative sponsor, the Chicago-based National Conference of Commissioners on Uniform State Laws (NCCUSL), suspended efforts to win state adoption.

Alternative Options

But UCITA can still be used as a contract model, said Jean Braucher, a University of Arizona law professor who is working with Americans for Fair Electronic Commerce Transactions (AFFECT) to develop a model bill. "Eventually, we need an alternative," she said.

The model bill will be based on a set of principles AFFECT developed earlier this year. For instance, UCITA all but barred any type of reverse-engineering of a software product. But AFFECT argues in its principles that "sellers

marketing to the general public should not prohibit lawful study of a product, including taking apart the product."

AFFECT's effort has drawn the interest of the Chicago-based Society for Information Management, an organization of nearly 3,000 IT professionals. Phil Zwieg, a SIM vice president, said AFFECT's efforts will be particularly helpful to smaller companies that don't have the clout or legal staff to negotiate a licensing contract.

AFFECT hasn't decided on its next step or whether it will muster a lobbying effort to push for state-by-state adoption of its model bill.

Licensing Principles

Americans for Fair Electronic Commerce Transactions has developed a list of 12 principles it believes should govern licensing contract terms. Among them are:

■ Ensuring that customers are not bound by terms simply because they visit a Web site or open a link containing a product.

■ Making customers aware of nontrivial defaults.

■ Providing refunds when product is not "of reasonable quality."

■ Barring "self-help" or repossession by remotely disabling a digital product.

NOTE: Full list is at www.fairterms.org

Regardless, Cem Kaner, a software engineering professor at the Florida Institute of Technology in Melbourne and a longtime critic of vendors' software licensing practices, said that for corporate users, the licensing model "is

a reference point, a basis for speaking in negotiations, for objecting to terms, for saying that I have a standard form to follow."

Kaner noted that UCITA remains influential. It has been taught in law schools and is al-

ready influencing court opinions, even if it isn't cited by name, he said.

But John McCabe, legislative and legal director of the NCCUSL, said he doubts that UCITA will have much influence on the courts. "The impact of proposed legislation like uniform acts on the case law is highly problematic," he said. The courts will put emphasis on prior cases, not on statutes that haven't been adopted, McCabe said.

He said it's highly likely that the NCCUSL will again examine software licensing and computer information issues at some point, but not in the foreseeable future. **55437**

Users Act to Encrypt Mobile Data

Concerns linger about untested handheld tools

BY JAIKUMAR VIJAYAN

Companies looking to protect data on mobile client devices such as notebooks, handheld devices and smart phones are getting more options to choose from.

Last week, Trust Digital Inc., a McLean, Va.-based vendor of mobile security software, released a new version of its technology that's designed to allow security administrators to extend and enforce access-control and encryption policies on mobile devices.

There are several components to the company's new Trust Digital 2005 software. One feature allows systems administrators to control access to ports such as Universal Serial Bus (USB), FireWire and Bluetooth. The software also lets administrators ensure that critical information is encrypted when it's transferred to removable media such as USB thumb drives and writable CDs.

Trust Digital's tool is one of a small but growing number of products designed to give companies a way to protect data on mobile clients. Another vendor, Addison, Texas-based Credant Technologies Inc., ships a product that's nearly identical to Trust Digital's tool. And PC Guardian Technologies Inc. in San Rafael, Calif., offers a technology that allows companies to encrypt e-mail and data on mobile computers, desktops, handhelds and removable storage devices.

Critical Appeal

The appeal of such technologies is that they allow security policies to be extended and enforced on mobile products at a time when a growing amount of critical data is being stored on such devices, said Randy Maib, senior IT consultant at Integrus Health Inc. in Oklahoma City.

As part of its effort to comply with the Health Insurance Portability and Accountability Act, Integrus is using a tool from Credant to protect data on mobile devices "by forcing authentication and encrypting

data," he said. "A secondary goal was to discover how many mobile devices were being used in our environment."

The Credant product is deployed on more than 2,300 computers used by Integrus workers, and the goal is to have it on all 5,000 desktops and mobile devices by the end of this year, Maib said.

PepsiAmericas Inc., a Rolling Meadows, Ill.-based bottler that is partly owned by PepsiCo Inc., is using the Trust Digital product to protect data on over 300 handheld devices used by its sales staff in Central Europe.

The technology lets Pepsi encrypt sensitive information on the handhelds and control what users can do with the devices, said Laszlo Kovari, a PepsiAmericas information security manager in Budapest.

"My idea was to extend the same level of protection that we provide for laptops and PCs to PDAs as well. From a pure security standpoint, it provides for confidentiality and integrity of the data on the devices," Kovari said.

The \$2.5 billion CUNA Mutual Group in Madison, Wis.,

is using similar technology from Credant to encrypt data on more than 600 mobile computers used by its field sales force.

The decision to implement the technology was driven by concerns about theft and accidental loss of data, said David Meunier, CUNA Mutual's chief information security officer.

"The one thing we are really trying to address is the risk that mobile technologies, specifically laptops, present to any business," said Meunier, who is now looking to extend the same protection to enterprise handhelds.

Despite some of the benefits, there are caveats as well, users said. For one thing, products from companies such as Credant and Trust Digital are still fairly new and relatively untested, Maib said. "Encryption is not a silver bullet," Meunier said. "It adds a whole realm of things that you need to start thinking about."

For example, using encryption to protect data — whether full-disk or only partial encryption — can also have performance implications and require greater disk capacity and investment, Meunier said. **55434**

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FRANK HAYES ■ FRANKLY SPEAKING

Fear, Anger, Distrust

CAN YOUR USERS CHANGE when it comes to security? Yes, probably. At least that's what two surveys that came out last week suggest. The Pew Internet & American Life Project polled 1,300 Internet users about spyware and related problems (the results are online at Pewinternet.org). Meanwhile, *Computerworld.com* columnist Larry Ponemon reported on a Ponemon Institute survey of 400 people who were victims of a personal data breach [QuickLink 55301].

Neither study is intended to be about changing what users do. But the lessons they offer in that line are pretty compelling.

Unfortunately, you may not much like those lessons.

See, the main thing that's clear from both studies is that fear, anger and distrust are what motivate users to change. In the Pew survey, 91% of users said fears about malware have made them change how they deal with e-mail, the Web, downloads and even software user agreements. And, according to the Ponemon survey, most of those whose personal information is leaked will dump the bank, credit card or other company that exposed their data.

So users will change — if they get afraid, angry or distrustful. That might be useful in getting them to stop doing risky, insecure things. But only if you make sure they're not afraid, angry or distrustful in your direction.

So threatening them with punishment for breaking security rules won't work. Neither will trying to force them to obey or lying to them. No wonder IT's standard techniques for getting users to behave always fail. They're exactly the wrong approach.

Then what might work? Beyond fear, anger and distrust, there are some other useful insights to be gleaned from these studies:

■ **Users like the personal touch.** According to the Ponemon survey, users who got a phone call after their personal data was exposed were much more likely to trust the company than were users who just got a written notice. Lesson for IT: Memos don't work. Personal contact is expensive, and lots of IT people could use some polish on their people skills. But if you want to change behavior, you'll need to do it one on one.

■ **Users drag their feet, but they want a quick response from others.** The Pew survey says two-thirds of users will wait a week or more before dealing

with a suspected spyware infection, and 20% will never deal with it. But the Ponemon results say users resent any delay in being informed of a security breach. Lesson: You need to respond fast, then convey that urgency to users so they'll call you as soon as they suspect a problem instead of letting it fester.

■ **Users pass the buck.** Pew says users often blame friends or family for spyware infections. ("Nope, it's not my fault.") Lesson: Never mind the blame for past problems. Focus on things that "we" — meaning users and IT staffers — can do to avoid this problem going forward.

■ **Users do better with follow-ups.** In fact, Ponemon says that 82% of users expected more help than they got after their data was exposed. Lesson: Don't do just enough. Don't tell them just once. Remind them. Repeat the message. Then check back to reinforce it with a positive spin. ("Everything working OK? Still keeping an eye out for those bad e-mail attachments?")

■ **Finally, users want more information. Really.** Ponemon says 67% of users thought the information they got after a security breach was incomplete or unreliable. Pew says 60% of users who have spywarelike problems can't figure out what's wrong. Lesson: Give users that information. Make it straight, clear and useful. Ask for questions. Make sure users understand your answers. You want them to clearly grasp security threats and the damage they can do.



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After all, now that you know the strongest motivators of change for users, you want their fear, anger and distrust aimed squarely at security threats — where they belong. ☎ 55415

Six the Hard Way

There's a big plasma screen in this hospital emergency room that's used as a tracking board, and the PC it's attached to is in a nearby closet. An ER nurse watches as IT pilot fish pulls the mouse through the doorway to adjust the active window on the screen. "We didn't know that the mouse cord could stretch that far," nurse tells fish. "Whenever we want to use the mouse, we've used two people — one moving the mouse blindly, the other yelling 'right,' 'left,' 'up' or 'down.'"

Kids, Don't Try This at Home!

This IT shop's policy is to disassemble decommissioned hard drives and physically destroy the drive platters. But pilot fish has never done that to a laptop drive before. "Wanting to destroy all the data, I proceeded to bend the disk platter," says fish. "It was only then that I found out that it was made of glass. It exploded into a gazillion little pieces, each smaller than a grain of rice. It was in our hair, clothes and desks — and nine months later, we still find pieces in that office."

Thanks, Boss

It's the 1970s, and pilot fish working at a big federal agency finds a useful program for building economic models. It's written and maintained by another agency, so it's already paid for. Better still, it's coded in a new matrix-based language that uses single-line commands instead of nested Fortran DO loops, and no special formatting is needed for output. Fish is delighted — until his boss orders, "Translate it into Fortran, so I can understand how it works."

SHARK TANK

Backup Flop

High-level employee departs, and pilot fish is tapped to back up his files to a CD in case they're needed. But fish can't find them on the network, and they're no longer on ex-employee's hard drive, either. "Not to worry," says fish after finally finding the files. "The responsible employee was very thorough at saving his data. To floppies. Fourteen years' worth!"

Missing Piece

Traveling executive calls administrative assistant, asking her to retrieve a document from his laptop. "She called IT for assistance, as she could not seem to turn on his computer," says support pilot fish. And no wonder. "She was trying to turn on his empty docking station," fish sighs. "The executive had his laptop with him."

Universal Time

User calls round-the-clock tech support hotline to ask what hours the call center is open. "The number you dialed is open 24 hours a day, seven days a week," says pilot fish. User: "Is that Eastern or Pacific time?"

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